CATALOGUE

OF

1713 STARS.

FOR THE EQUINOX

1885·0.

FROM OBSERVATIONS MADE AT THE

ROYAL OBSERVATORY, CAPE OF GOOD HOPE,

DURING THE YEARS

1879 TO 1885:

UNDER THE DIRECTION OF

DAVID GILL, LL.D. (ABD. & EDIN.), F.R.S., HON. F.R.S. ED., &C.,
HER MAJESTY'S ASTRONOMER AT THE CAPE.

WITH APPENDICES:—

I.—CATALOGUE OF 104 SOUTHERN CIRCUMPOLAR STARS.

II.—SEPARATE OBSERVATIONS OF β, a_2 & a_1 CENTAURI.

PUBLISHED BY ORDER OF THE LORDS COMMISSIONERS OF THE ADMIRALTY, IN OBEDIENCE TO HER MAJESTY'S COMMAND.

LONDON:
PRINTED FOR HER MAJESTY'S STATIONERY OFFICE,
BY DARLING & SON, LTD., 1, 2, 3, & 5, GREAT ST. THOMAS APOSTLE, E.C.

1894.

ERRATA.

Star No. 5. Mean Date, *for* 81·52 *read* 81·46: No. of Obs., *for* 12 *read* 10: Mean Dec., *for* — 3°. 11′. 20″·15 *read* — 3°. 11′. 19″·91.

Star No. 44. Secular Variation in R.A., *for* — 3^s·056 *read* + 3^s·056.

Star No. 922. Secular Variation in R.A., *for* + 0^s·331 *read* + 0^s·031.

Star Nos. 1002–3. Annual Proper Motions, *for* — 0^s·4795 *read* — 0^s·4847, *for* + 0″·789 *read* + 0″·736.

Star No. 1340. Cape Catalogue 1880, *for* 1043 *read* 10433.

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INDEX.

CAPE

GENERAL CATALOGUE OF STARS

FOR

1885·0.

INTRODUCTION.

The results given in the following Catalogue are based upon observations made with the Cape Transit-Circle from 1879 June 1, to 1885 February 8. They represent the Mean Right Ascensions and Declinations of the Stars at the Mean Epoch of observation, reduced *without Proper Motion* to the Equinox 1885·0.

The necessity which had arisen for repolishing the object-glass of the Transit-Circle, and of replacing the easily worn gun-metal screws of the micrometer-microscopes by steel screws, compelled the interruption of meridian observations in February 1885. As the programme for the observation of the Fundamental Stars of Schönfeld's *Durchmusterung* was completed, it seemed desirable to prepare the Catalogue for the use of Astronomers, particularly as the whole work would then depend upon observations with the instrument in an unaltered condition.

The MSS. of the Catalogue has been for some time ready, and was only withheld from press in the hope that the question of change of Astronomical Latitude would be sufficiently settled to permit the application of definitive corrections for the elimination of its effect, and that the Leiden observations would be ready for discussion of the Refraction. These matters, however, seemed to ripen slowly, so that it was at last decided to publish the Catalogue in its original form rather than impair its usefulness by further delay.

The working list for this Catalogue was formed originally of the following classes of Stars :—

Fundamental Stars for the meridian observation of the Stars of Schönfeld's *Durchmusterung*.

Stars suitable for determining the errors of the Refraction Tables by observations at Greenwich, Leiden, and the Cape.

Southern Circumpolar Stars.

Stars employed in connection with Heliometer observations for scale-value and Stellar Parallax.

Special observations of α and β Centauri.

To this list there were subsequently added :—

Stars employed in the Longitude operations connecting Aden and the Cape.

Stars employed in the Latitude and Longitude operations connected with the Geodetic Survey of South Africa.

Comparison Stars employed in the observations of Comets and Minor Planets.

Stars whose occultations by the Moon had been observed.

In 1884 a new working list was prepared containing, in addition to Stars of the above-mentioned classes, all Stars of the 4th Magnitude or brighter which could be observed at the Cape, and any Stars additional to these that were to be found, or of which more accurate places were required for future use, in any of the National Ephemerides. Observations of Stars of the latter classes are necessarily very incomplete in consequence of the interruption of the work in February 1885. Complete series of observations of all these Stars will be found in the next Cape General Catalogue, in which it is proposed to include the results of the Cape meridian observations from March 1885 to 1895.

Explanation of the Separate Columns of the Catalogue.

Left-Hand Page.

"No." is the rotation number. An asterisk (*) attached to this number signifies that the Star is one of the Fundamental Stars for the zones of Schönfeld's *Durchmusterung* (*Ast. Nach.* 2890–91) ; a dagger (†), that the Star is one of the Fundamental Stars for subsequent meridian observation of the zones of the Cape *Durchmusterung*, between 20° and 80° of South Declination. (Auwers *Monthly Notices R.A.S.*, Vol. XLVII., pp. 455–473.) When the Star belongs to both these lists the asterisk only is affixed, and the note "Fundamental Star for Southern Zones" is printed at the bottom of the page.

"Bradley or Lacaille."—This column gives the corresponding number in Auwers' "*Neue Reduction der Bradleyschen Beobachtungen*," or that in the British Association Catalogue of Lacaille's observations—"*Catalogue of* 9766 *Stars in the Southern Hemisphere.*"

When the Star is in one of these Catalogues only, the numeration alone is sufficiently distinctive, when it is in both Catalogues the Bradley Number is given with an asterisk attached.

"Piazzi."—This column gives the Hour and Number in Piazzi's Catalogue (Edition of 1814).

"B.A.C."—The number in the British Association Catalogue of 8377 Stars.

"Star's Name."—For Stars contained in Auwers' Bradley the nomenclature of that work has been retained, only substituting *Argûs* or *Puppis* for *Navis*. For Stars not in Auwers' Bradley the nomenclature of the Fundamental list (*Ast. Nach.* 2890) was adopted. For all other Stars between the South Pole and Declination $-23°$ the nomenclature of the Argentine General Catalogue was employed, and for Stars North of Declination $-23°$ that of the British Association Catalogue. The only exceptions to these rules are a very few close Circumpolar Stars which are designated by letters long in use at the Cape.

For otherwise unnamed Stars the Catalogue number is referred to in the following order of preference :—

(1.) Auwers' Bradley, referred to as Bradley.

(2.) British Association Catalogue of Lacaille's observations, referred to as Lacaille.

(3.) The Hour and Number in Piazzi's Catalogue (Edition of 1814).

(4.) Lalande's Catalogue, published by the British Association.

(5.) The Hour and Number in Weisse's Catalogues of the Stars in Bessel's zones, the zones $-15°$ to $+15°$ being referred to as W.B., and the zones $+15°$ to $+45°$ as W.B. (2).

(6.) The Argentine General Catalogue referred to as A.G.C.*

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* I regret now the use of these letters for this purpose ; C.G.A. would be preferable, as A.G.C. has been used for some time to denote the Astronomische Gesellschaft Catalogue.

(7.) The Cape Catalogue of 12,441 Stars referred to as Cape (1880).

(8.) The Hour and Number in the Argentine Zone Catalogue referred to as C.Z.

(9.) The *Bonner Durchmusterung* referred to as B.D.

All notes respecting the "name" are given on this page.

"Magnitude."—For Stars North of Declination − 30° the magnitudes (unmarked) are taken from "Harvard Photometry," and South of that Declination from the Argentine General and Zone Catalogues.

Those magnitudes which are marked with an asterisk are taken from the *Bonner Durchmusterung*. all others are marked with a dagger, and the authority is given in the notes on the right-hand page.

The particulars respecting Variable Stars are from Chandler's Catalogue (*Astron. Journal*, Nos. 179 & 180), unless otherwise stated.

"Mean Date."—The mean epoch of observation expressed in years from 1800.

"No. of Obs."—The number of observations of R.A.

"Mean R.A. 1885·0."—The formation of the Right Ascension is explained, pp. x to xv, the results here given refer to the mean epoch of observation and the Equinox 1885·0.

"Annual Precession 1885·0."—The Precession in R.A. was computed from the formula—

$$3^s\cdot0724 + 1^s\cdot3369\ [\log. = 0\cdot12610] \sin\alpha \tan\delta$$

by the use of Mr. Stone's Tables (Appendix to Cape Observations 1874).

"Secular Variation."—For Stars between 0° and 60° Declination the Secular Variations were taken from MSS. tables specially prepared. For the other Stars the values have been computed by the formula—

$$A + B \tan\delta + C \tan^2\delta$$

where—

$$A = 0^s\cdot00190 + 0^s\cdot00650 \sin 2\alpha$$
$$B = - 0^s\cdot00057 \sin\alpha + 0^s\cdot02987 \cos\alpha$$
$$C = + 0^s\cdot01300 \sin 2\alpha$$

with the aid of Folie's Tables.

"Annual Proper Motion."—The Proper Motions taken from Auwers' list of "Fundamental Stars (*Ast. Nach.* 2890)," from his "*Neue Reduction der Bradleyschen Beobachtungen*," or his Catalogues of Fundamental Stars (Pub. der Ast. Gesellschaft), are printed without mark or note. Those taken from the Cape Catalogue 1880, are marked with an asterisk; and for the few proper motions from Newcomb's Catalogue of 1098 Standard Stars, the Bonn Observations, Vol. VII., and other sources, the authority is mentioned in the notes on the right-hand page.

"Correction for μ_α to 1885·0."—For the convenience of Astronomers who may desire to compare this Catalogue with others reduced to the Epoch and Equinox 1885·0, this column gives the correction to be applied on account of Proper Motion to the R.A. of the present Catalogue, to reduce the Catalogue place to the Epoch 1885·0.

Right-Hand Page.

"No."—An asterisk (*) attached to the number on this page signifies that there is a foot-note referring to the star.

"Mean Date." "No. of Obs."—These columns have the same significance as the similar columns on the left-hand page.

"Mean Dec. 1885·0."—The formation of this column is explained on pp. xv to xxv.

"Annual Precession 1885·0."—The Precession in Declination was computed by the use of Mr. Stone's Tables (Appendix to Cape Observations 1874) from the formula—

$$20''\cdot0534 \cos \alpha.$$

"Secular Variation."—The formula employed was—

$$A^1 + B^1 \tan \delta$$

where—

$$A^1 = - 0''\cdot0086 \cos \alpha - 0''\cdot4480 \sin \alpha$$

$$B^1 = - 0''\cdot1950 \sin {}^2\alpha.$$

"Annual Proper Motion." "Correction for μ_δ."—These columns are constructed on the same basis as the corresponding columns on the left-hand page.

"Fallows and Henderson."—Numbers printed in ordinary type refer to Fallows', those in italics to Henderson's Catalogue. An asterisk attached signifies that the Star occurs in both Catalogues, the number in Fallows' being given.

"A.G.C. 1875."—The Argentine General Catalogue. Gould.

"Melbourne 1870 & 1880."—Numbers printed in ordinary type refer to the Melbourne Catalogue for 1870; those in italics to the Catalogue for 1880. An asterisk attached signifies that the Star occurs in both Catalogues, the number in 1870 being given.

The other columns of reference are sufficiently explained by their respective headings.

Right Ascensions.

The Clock-Stars employed are those of the *Fundamental Catalog für die Zonen Beobachtungen am Nordlichen Himmel*, which are situated between the limits of + 10° and − 10° of Declination.

The Right Ascensions of Clock-Stars are not included as determinations unless at least five observations of Clock-Stars have been obtained on the same night.

The Right Ascensions of Stars within 10° of the Pole have not been included as determinations unless either the Star has been observed both at upper and lower culminations, or the Azimuth has been otherwise strongly determined on the same night, that is to say, by double transits of other circumpolars, or by transits of at least four Circumpolar Stars whose places have been recently determined fundamentally. The observations have been entirely made by the method of "Eye and Ear."

Personal Equation.

The ordinary corrections for Personal Equation applicable to the determinations of Clock-Error need not be here given in detail; the results as determined from time to time will be found in the Introduction to the *Cape Meridian Observations* 1879–81, p. xxvi., and 1882–85, p. xxv. The Clock-Rates from day to day are corrected for Personal Equation, but the Clock-Error as determined by the observer at the mean epoch of each set of observations has invariably been employed in the reduction of all observations of that set. The Right Ascensions are, therefore, practically unaffected by Personal Equation, unless that equation varies for Stars different in Magnitude and Declination from the Clock-Stars.

In order to determine the variation of Personal Equation for Stars of different Declinations, a long series of observations was made in 1879. A list of Stars was prepared, divided into zones of Declination; two observers were on duty at the same time, and each observed the transit of the same Star over several wires, changing places at the eyepiece at the middle of the transit. Thus one observer, G, would observe the first three wires, the other, F, the last three wires for the first Star, and *vice versâ* for the second. Then putting—

$$\text{Clock slow (true)} = \text{Clock slow (as observed by G)} + \text{G}$$
$$\text{„ „ „} = \text{„ „ (as observed by F)} + \text{F}$$

with similar notation for the other observers, and adopting—

$$\text{G} + \text{F} + \text{M} + \text{P} + \text{I} = 0^{s}\cdot000$$

a number of equations was obtained, from which the following values of G, F, M, &c. were found.

Observer Facing	Zone.	Declination.	G.	On Great Circle.	F.	On Great Circle.	M.	On Great Circle.	P.	On Great Circle.	I.	On Great Circle.
		° °	s	s	s	s	s	s	s	s	s	s
N	I.	+ 15 to − 15	−0·061	−0·061	−0·048	−0·048	+0·113	+0·112	−0·091	−0·090	+0·087	+0·086
N	II.	− 15 „ − 30	−0·078	−0·072	−0·066	−0·061	+0·104	+0·096	−0·095	−0·088	+0·134	+0·124
S	III.	− 30 „ − 45	−0·015	−0·012	−0·081	−0·064	+0·067	+0·053	−0·082	−0·065	+0·110	+0·087
S	IV.	− 45 „ − 60	+0·035	+0·021	−0·122	−0·074	+0·117	+0·071	−0·140	−0·085	+0·109	+0·066
S	V.	− 60 „ − 75	+0·120	+0·046	−0·115	−0·044	+0·134	+0·051	−0·182	−0·070	+0·043	+0·016
S	VI.	− 75 „ − 85	+0·350	+0·061	−0·170	−0·030	+0·227	+0·039	−0·217	−0·038	−0·189	−0·033

The sudden variation in these results at the Zenith at once led to the suspicion that there must be a considerable personality dependent on the apparent direction of motion of the Star across the field of view. To test this point a list of Stars culminating near the Zenith was selected. The observer, facing North, noted the times of transit over the first three wires, and then, facing South, noted the times of transit of the same Star over the last three wires, and *vice versâ* for the next Star. The results for the various observers were—

$$G_N - G_S = + 0^s{\cdot}076.$$
$$F_N - F_S = + \cdot 079.$$
$$M_N - M_S = + \cdot 122.$$
$$P_N - P_S = + \cdot 015.$$
$$I_N - I_S = + \cdot 066.$$

Thus all the observers have a systematic error, similar in character, depending on the apparent direction of motion across the field of view. It is perhaps worthy of remark that the observer P, whose systematic error in this respect is smallest, and almost insensible, is ambidextrous, as he handles tools, &c. with equal facility with either hand. In consequence of this result I had a reversing prism mounted between the eyepiece and the observer's eye.*

* The adjustment of the reversing prism is a delicate operation requiring the greatest care and nicety. The prism may not be made too large, otherwise the observer's eye is too far removed from the eye-lens and the field of view becomes too limited. On the other hand, when the prism is of the proper size, unless its neutral axis is rigorously parallel to and coincident with the optical axis of the eyepiece, a part of the emergent pencil is cut off, and a non-symmetrical image of the Star is the result. The only satisfactory test is to examine the emergent pencil with a lens or dynamometer (in the manner usually employed to measure the magnifying power of a telescope) and so ascertain whether the full image of the object-glass can be seen in full illumination in all positions of the prism's rotation.

This prism is capable of rotation about its axis, and consequently of reversing the apparent direction of the Star's motion across the field of view. To prevent any confusion on part of the observer in the use of the prism, the following simple device was employed to define its position. The prism itself is mounted on a brass disc,

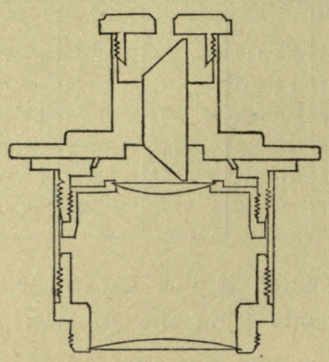

Fig. 1.

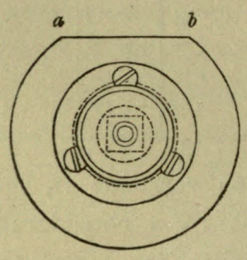

Fig. 2.

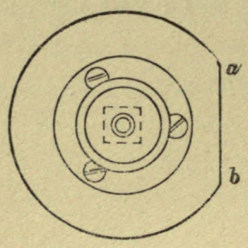

Fig. 3.

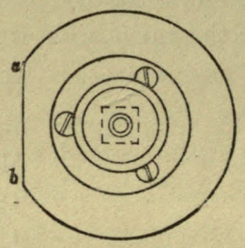

Fig. 4.

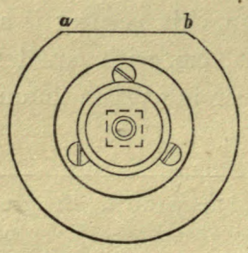

Fig. 5.

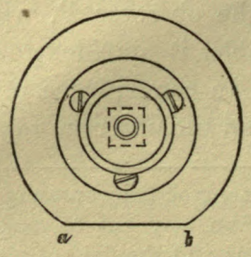

Fig. 6.

shewn in plan and section in the accompanying Figures 1 and 2. This disc can be rotated by the observer with the greatest ease, without disturbing the focal adjustment of the eyepiece ; the prism, as shewn in Figure 2, is mounted on this disc.

A portion of this disc is filed away to form a flat *a b*, Figs. 2, 3, 4, 5, 6. The line *a b* is at right angles to the plane of the base of the reversing prism, therefore when this line is placed *vertically*, as in Figures 3 and 4, the apparent motion in Right Ascension is not changed, but when the line *a b* is placed *horizontally*, as in Figs. 5 and 6, the apparent direction of motion is reversed. These positions of the prism are denoted in the observer's book by the letters V and H respectively.

After November 1880 in every transit-observation the first three wires were observed with the prism in position H, and then a like number with the prism in position V, or *vice versâ*; thus, when the separate wires are reduced to the middle wire, the mean result is free from personal error depending on the direction of motion.

Almost all the Stars observed before the adoption of the reversing prism were within 30° of the Equator, hence practically the same correction would have to be applied to the Clock-Stars as to the Stars observed for place, therefore no correction for the V − H discordance has been applied to the results 1879 to November 1880. In all observations subsequent to the latter date the error depending on the direction of apparent motion has been systematically eliminated by use of the reversing prism as above described. After the reversing prism had been some time in use, the following results were obtained from a discussion of the observations, by reducing the observed times in the positions V and H to the middle wire.

Equatorial Stars. V—H.		No. of Obs.	Polar Stars. (V—H) cos δ.	No. of Obs.
	s		s	
F	− 0·068	51	...	...
M	− 0·038	646	+ 0·036	150
P	+ 0·004	633	− 0·012	205
C	+ 0·001	212	− 0·002	39
I	− 0·072	318	+ 0·016	81

Now position V gives for Equatorial Stars the same apparent direction of motion with reference to the observer's right or left hand that position H does for Stars South of the Zenith; thus the above results for F, M, P and I agree in sign, and (with the exception of M) in amount, with those derived from the observation of transits of Zenith Stars in reversed positions of the observer with reference to North and South. The agreement of the values of V − H (except in the case of observer I) for Polar Stars reduced to the great circle, is very close. For slow moving Stars the observer I had always a considerable and rather variable Personal Equation (*Cape Observations* 1871-75, p. ix.), and his observations seldom enter into the determinations of the Right Ascensions of Circumpolar Stars.

It seems probable therefore, that, with the systematic use of the reversing prism, the effect of Personal Equation depending upon Declination is to a great extent eliminated.

In connection with the discussion of the Meridian Observations of the Mars Comparison Stars in 1877 it appeared that observations by "Eye and Ear" were not, in the mean, affected by magnitude (*Memoirs, R.A.S.*, Vol. XLVI., p. 80). On this account no special steps were taken to determine the Personal Equation depending upon magnitude till the Meridian Observations of the *Victoria* and *Sappho* Comparison Stars were under discussion by Professor Auwers, when, at his request, special observations were made for the purpose.

The Right Ascensions of the *Victoria* and *Sappho* Stars were observed by the "Chronographic" method; the results were communicated to Professor Auwers, and will be published in his discussion of the Meridian Observations of these Stars. At the same time (1890 March to June) observations were made to determine the personality depending on magnitude for "Eye and Ear" Observations, and, contrary to expectation, the correction was found to be very marked.*

The work of preparing the Catalogue was then too far advanced to permit the corrections to be applied without undue labour to the individual results, but the corrections applicable to the different observers are so similar that the following means may be adopted as applicable to all the Catalogue places.

CORRECTIONS APPLICABLE TO THE RIGHT ASCENSIONS.

Argument, Star's Magnitude.

Magnitude.	Correction.	Magnitude.	Correction.	Magnitude.	Correction.
	s		s		s
1	+ 0·030	4	0·000	7	— 0·034
2	+ 0·020	5	— 0·013	8	— 0·043
3	+ 0·012	6	— 0·024	9	— 0·050

Observations of Right Ascension by Reflexion.

Observations of Right Ascension by Reflexion were commenced in 1884. A comparison of the Clock-Errors deduced from the Direct and Reflex observations for the three observers M, P and C (there was not sufficient material in the case of

* The method adopted was to observe the transit of the first star over the first three wires, and then cover the object-glass with a wire gauze screen and observe the transit of the same star (but of diminished brightness) over the last three wires; and *vice versâ* for the next star.

observer R) shewed that the following corrections should be applied to the Reflex observations to make them produce the same Clock-Error as the Direct observations.

$$M = + 0^s{\cdot}054 \; ; \; P = + 0^s{\cdot}008 \; ; \; C = + 0^s{\cdot}045.$$

No correction, however, has been applied in the Journals to the observations of Right Ascension made by Reflexion, so that such observations are reduced on their own merits, and with a Clock-Error derived solely from the Direct observations.

A comparison was then made between the results Reflex and Direct for the Stars in the 1884 Annual Catalogue, with the following results for D – R.

N.P.D.	D—R.			N.P.D.	D—R.		
	$\Delta\alpha$.	$\Delta\alpha \cos\delta$.	Weight.		$\Delta\alpha$.	$\Delta\alpha \cos\delta$.	Weight.
° °	s	s		° °	s	s	
66— 70	+ 0·028	+ 0·026	31	106—110	— 0·011	— 0·010	81
71— 75	+ 0·029	+ 0·028	53	133—137	+ 0·015	+ 0·011	60
76— 80	+ 0·026	+ 0·025	59	138—142	0·000	0·000	47
81— 85	+ 0·021	+ 0·021	74	143—147	0·000	0·000	42
86— 90	+ 0·020	+ 0·020	81	148—152	+ 0·051	+ 0·026	34
91— 95	+ 0·011	+ 0·011	49	153—157	+ 0·036	+ 0·009	29
96—100	+ 0·028	+ 0·028	65	158—162	+ 0·047	+ 0·016	18
101—105	+ 0·017	+ 0·017	50	163—169	+ 0·041	+ 0·010	18

No correction has been applied to the Reflex observations when combining them with Direct observations to form the place given in the General Catalogue.

Declinations.

The reader is referred to the Introduction of the *Cape Meridian Observations* 1879–81 (pp. xiii–xxiv) for an account of the methods by which the errors of graduation of the Circle were determined for each single degree of the Circle. These corrections have been rigorously applied to the results given in the Annual Catalogues.

In the Introduction to the *Cape Meridian Observations* 1882–85 will be found an investigation of the errors of the screws of the Circle-Microscopes, and of the effects of their progressive wear since 1879. These results, as applicable to the Runs at various epochs, are given in Table M_1, p. xviii., and, as applicable to the Circle-Microscope readings, in Table M_2, pp. xviii–xxi ; the corrections depending on the reading of the eyepiece micrometer-screw are given in Table N, p. xxi *loc. cit.* The published results of *Cape Meridian Observations* 1882–85 are corrected for these errors of the screws, but those of 1879–81 are not so corrected, because the fact of rapid wear of the screws

had not been established when these observations were printed. The necessary corrections for the Screw-errors previous to 1882 have however been since computed and applied to the separate observations by the methods described, p. xvii. *loc. cit.*, so that the positions of Stars given in the present Catalogue are free from the errors in question.

The results for N.P.D. given in the annual Catalogues are formed on the assumptions,—

1. That the results are unaffected by instrumental Flexure.
2. That the Refractions of Bessel's *Tabulæ Regiomontanæ* are rigorously applicable.
3. That the Latitude is $-$ 33° 56′ 3″·20.

Flexure.

By observations of opposite horizontal Collimators, the half sum of the Horizontal Flexures to North and South was determined seven times in January 1881 and eleven times in February 1885, with the result that the upper semi-circle is measured = 180° 0′ 0″·924, or that the correction for Mean Horizontal Flexure is = $-$ 0″·462 ; Probable Error ± 0″·020.

The separate results are given in the Introduction to the *Cape Meridian Observations* 1882–85, p. xxviii. The negative sign indicates that the Instrumental Zenith Distances require a negative correction, in other words the eye-end of the telescope bends or falls more than the object-glass end.*

In preparing the Declinations of the present Catalogue the Flexure is assumed to be

$$-\ 0''{\cdot}46 \sin \text{Z.D.}$$

In 1884 a large number of observations was made by reflexion. The results are given in the Introduction to the *Cape Meridian Observations* 1882–85, p. xxx. In the preparation of this Table the correction for the Latitude of the mercurial trough was erroneously applied to the values of R—D from the formula

$$0''{\cdot}08 \sin \text{Z.D.}$$

The proper correction is 0″·16 sin Z.D.

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* The reader is requested to correct a mistake on p. xxix of the Introduction to the *Cape Meridian Observations* 1882–85, where the erroneous conclusion is drawn that the excess of the Instrumental Z.D. is due to greater bending of the object-glass end than of the eye end.

The corrected results are,—

TABLE I.

Group.	Mean. N.P.D.	Mean Z.D.	No. of Stars in Group.	Number of Observations.		N.P.D. $\overline{R-D}$ uncorrected for Flexure.	Probable Error.	Weight.	N.P.D. $\overline{R-D}$ corrected for Flexure.
				D.	R.				
	° ′	° ′				″	″		″
I.	66 59	− 56 57	15	54	34	− 0·28	± 0·151	11·0	− 1·05
II.	71 37	− 52 19	20	102	68	− 0·42	± 0·094	28·3	− 1·15
III.	76 33	− 47 23	29	136	114	+ 0·09	± 0·090	30·9	− 0·59
IV.	81 40	− 42 16	35	218	139	+ 0·21	± 0·084	35·4	− 0·41
V.	86 29	− 37 27	32	191	114	+ 0·39	± 0·077	42·2	− 0·17
VI.	91 17	− 32 39	20	123	85	+ 0·24	± 0·070	50·9	− 0·26
VII.	96 50	− 27 6	22	140	115	+ 0·13	± 0·063	63·0	− 0·29
VIII.	100 46	− 23 10	21	124	114	+ 0·01	± 0·074	45·6	− 0·35
IX.	106 21	− 17 35	31	192	185	+ 0·28	± 0·056	79·6	0·00
X.	111 37	− 12 19	23	114	96	+ 0·01	± 0·073	46·9	− 0·19
XI.	133 6	+ 9 10	10	37	35	− 0·39	± 0·180	7·7	− 0·24
XII.	136 27	+ 12 31	30	146	127	− 0·03	± 0·062	65·1	+ 0·17
XIII.	141 27	+ 17 31	15	80	68	+ 0·09	± 0·086	33·8	+ 0·37
XIV.	146 36	+ 22 40	20	94	71	+ 0·15	± 0·096	27·1	+ 0·50
XV.	151 49	+ 27 53	15	59	59	+ 0·26	± 0·127	15·5	+ 0·69
XVI.	156 29	+ 32 33	14	54	55	− 0·05	± 0·096	27·1	+ 0·44
XVII.	160 38	+ 36 42	9	37	27	− 0·21	± 0·114	19·2	+ 0·34
XVIII.	167 24	+ 43 28	14	86	35	+ 0·13	± 0·082	37·2	+ 0·76
XIX.	171 48	+ 47 52	10	62	24	+ 0·36	± 0·127	15·4	+ 1·04

The figures in column 9 of Table I. are obtained on the assumption that the true Flexure correction is—

$$-\ 0''{\cdot}46 \sin \zeta$$

The resulting values of R − D resemble the corresponding values for the Greenwich Observations.

It is therefore important to decide whether the Reflex observations should be reduced to the Direct observations (after the latter have been corrected for Flexure), or whether both sets of observations should be reduced to the mean system $\frac{R+D}{2}$.

At Greenwich it has always been the practice first to apply the correction for Flexure on the assumption that the true value of the Flexure-Constant is derived from the observations of the Horizontal Collimators, and that the Flexure varies as the sine

of the Zenith Distance. This done, the values of R − D are obtained, and an expression is found to represent these values of the form—

$$a + b \sin \zeta$$
$$\text{or,} \quad a + b \sin \zeta \cos {}^2\zeta$$

and corresponding corrections are applied to reduce both the R and D observations to the system $\frac{R + D}{2}$.

This system of reduction obviously implies that the corrections first applied represent the true Instrumental Flexure, and that the R − D discordance has some other origin than true Instrumental Flexure.

The practice is based on a Memoir by Sir George Airy (*Memoirs R.A.S.*, Vol. XXXII., pp. 9–17), in which its distinguished author comes to the conclusions—

1. That "the origin of the discordance expressed by R − D lies in some con-
"formation of the warmer and cooler strata of the atmosphere in the
"immediate neighbourhood of the circle."

2. That "the means of the R and D results are more reliable as absolute
"measurements of Zenith Distance than those of R or D only," and
that "no Colatitude of an observatory where direct observations alone
"are used is certain to a quarter of a second."

With the first of these conclusions one can readily concur. The second, however, is hardly tenable in face of the first; for it implies that the law of Refraction will be better represented by the mean direction of two rays, one of which has traversed a much longer space of air (admitted to be irregularly heated by radiation from the walls and pier of the instrument) than by the direction of a single ray entering the object-glass between the vertical shutters, where there is, or should be, a free draught of outside air.*

The proof given by Sir George Airy in favour of his view is that, in the mean of the R and D observations, the observed Latitude of the Greenwich Circle is found to be the same, within narrow limits, during the three epochs 1836–41, 1842–48, and 1851–60; whereas, if the Latitude is deduced from the D observations only, the resulting Latitudes of the first and last of these periods differ from that of the middle period by − 0″·26 and + 0″·28 respectively.

* In the Greenwich and Cape Instruments the observer and the mercury trough occupy a pit or well, and the latter, except for observations at considerable Zenith Distance, is below the level of the floor.

But it is not difficult to find other reasons for these discrepancies. In those days there were no investigations of the errors of the Screws of the Micrometer-Microscopes, which, as has already been shewn at Greenwich, might alone readily account for the discordances in question ; nor in the case of the Mural Circles employed in the first two periods was there any effective determination of the division-errors. For these two periods also the Zenith-Point was determined from observations of Stars D and R, and all these determinations were assumed to be common to all Stars, and in computing the D results the instrument was assumed to be free from Flexure—for, indeed, there were no independent means of determining it by Collimators. For the last group of observations, 1851–60, the Transit-Circle was employed, the Zenith-Point was determined by Nadir Observations, combined with D and R observations of Stars, and in forming the D results the Flexure determined by the Horizontal Collimators was applied ; but this determination (upon which the calculated amount of the R − D correction entirely depends) is apparently based upon the results of only five Flexure determinations, which range in value from + 0″·20 to + 0″·88.

The observations in the mean of the two positions R and D do eliminate not only the term of the Instrumental Flexure depending upon sin ζ, but also errors of the Nadir-Point, and diminish to some extent the effects of errors of division and errors of the Micrometer-Screws. But if the R − D discordance has the physical explanation which Sir George Airy has given to it, then it is quite clear that the R results (however much they may have the effect of smoothing mean values of the Latitude) are in reality erroneous, unless they are reduced with a different law of Refraction, applicable to the mean or special condition of temperature of the irregularly heated air within the Observatory itself.

Mr. Christie, in his paper "*On the systematic errors of the Greenwich North Polar Distances*" (*Memoirs R.A.S.*, Vol. XLV.) apparently takes the opposite view, for at page 154 he argues as follows :—

"The change in the R − D and Flexure corrections on the piercing of the cube "(subsequently to the date of the Astronomer Royal's paper) was not accompanied "by any change in the shutter openings, or in the general meteorological conditions "of the room. There was, on the other hand, a change in the mechanical state of the "instrument, and in the method of making the Flexure determination. For the latter "the observation of one Collimator by the other was made after 1866 through the "pierced cube instead of with the Transit-Circle raised."

These words imply that the origin of the R − D discordance is, in Mr. Christie's opinion, due to instrumental causes, because, with the instrumental changes, and without any change in the shutter openings, the signs of the Flexure and of the R − D discordance were changed.

As a matter of fact, however, this change of sign is only apparent, not real.

If, for sake of simplicity, we take the epochs during which the corrections for R – D were assumed of the form

$$x + y \sin \zeta$$

we have the following :—

Epoch.	Mean Expression for R — D.*	Adopted Flexure.
1851–56 inclusive	+ 0′·04 — 0′·42 sin ζ	+ 0′·50 sin ζ
1857–61 „	+ 0·08 — 0·68 sin ζ	+ 0·56 sin ζ
1881–86 „	0·00 + 1·14 sin ζ	0·00 sin ζ

The actual corrections which should be applied to the Direct observations are

$$\frac{R-D}{2} + \text{Flexure} \times \sin \zeta$$

or practically

	Corrections applied to D.
for 1851–56	+ 0″·29 sin ζ
1857–61	+ 0″·22 sin ζ
1881–86	+ 0″·57 sin ζ

There is thus no change of sign in the correction applicable to the D observations. The increase in the constant of the correction in the last result may appear to be due to the piercing of the cube, but having regard to the fact that the flanges of the tubes are bolted near to the margins of the cube, the mechanical conditions are against such a theory. The wider range of Reflex observations, after the new Collimators were mounted, combined with the employment of a formula not truly representing the physical facts**, is apparently the cause of the small apparent increase. Be that as it may, the unquestionable fact remains, that *the true Flexure of the Greenwich Transit-Circle follows practically the same law from first to last.*

Professor Simon Newcomb calls attention to this fact in his paper on the North Polar Distances of the Greenwich Transit-Circle (*Astronomical Papers of the American Ephemeris*, Vol. II., pp. 414–418), and asks the pertinent question, " How is it possible " that a change in the Astronomical Flexure should have occurred without any change " in the Zenith Distances measured with the instrument ? "

* Taken for 1851–61 from Mr. Christie's paper, p. 156, *loc. cit.*, where, however, the values have to be doubled and corrected for inclination of the vertical at the surface of the mercury—the results are then as here given.

** The true law of R—D discordance, apart from Flexure, does certainly not follow the law of sin ζ ; the proof is a *reductio ad absurdum*, viz., that if Reflex observations could be continued to the horizon, the calculated effect of R—D would reach a maximum at the time when the Reflex and Direct rays coincide.

The true explanation appears to be that suggested by Newcomb *loc. cit.*, viz., that since the Collimators were viewed through the triangular openings in the central cube, the determinations of Flexure are erroneous.

This view is confirmed by the results given in Professor Turner's paper (*Monthly Notices*, Vol. LII. p. 146) "*On observations for coincidence of the Collimators "through the cube of the Transit-Circle at the Royal Observatory, Greenwich.*" This investigation shews that considerable systematic errors are produced in the coincidence of the Collimators "by viewing the South Collimator with the North one through "8 holes of sector form cut in the central cube of the Transit-Circle." Unfortunately in Professor Turner's paper the investigation is restricted to the effect on Collimation, and is not extended to the effect on Flexure, but the systematic error produced in the coincidence of the Collimators is quite sufficient to form a possible *vera causa* for the apparent change of Flexure.

It is much to be desired that a long series of observations should be made to determine the Flexure of the Greenwich Transit-Circle both on the old plan and on the new.

In the case of the Cape Observations I am convinced by many considerations, and in part by the results of an unfinished investigation in which I have been for some time occupied, that Airy's explanation of the R − D discordance, originally suggested by Faye, is the true one.

Although the vertical shutters of the Transit-Circle Room are always opened from three o'clock in the afternoon, the thick outer walls of the Observatory—heated as they are by the strong sunshine at the Cape—never acquire during the night the temperature of the outer air. Thus for Reflex observations the rays from Stars enter strata of air very irregularly heated. On the other hand the Direct observations are made in the air-space between the open shutters, where (as the observations are always made with both the vertical and horizontal shutters fully opened) there is a free draught of air, and the temperature is less different from that of the outer air, than it is below the level of the axis of the Transit-Circle.

For these reasons, and having regard to the fact that the errors of the Micrometer-Screws and of the Circle-divisions have been thoroughly investigated and the corresponding corrections applied, I am fully convinced that the Direct observations corrected for Flexure represent the true Zenith Distances far more accurately than do the mean of the Reflex and Direct observations.

In the Annual Catalogues the results are given without corrections for Flexure or R − D, and the Reflex results are not corrected for the position of the mercury-trough. Taking the mean values of D − R before the application of the correction $-0''\cdot16 \sin \zeta$,

and sweeping a curve through the results, we obtain the following corrections to reduce the Reflex N.P.D.'s of the Annual Catalogues to the system of those observed Direct.

TABLE II.

CORRECTIONS APPLICABLE TO THE REFLEX N.P.D.'S OF THE ANNUAL CATALOGUES TO REDUCE THEM TO THE SYSTEM OF THOSE OBSERVED DIRECT.

N.P.D.	Correction.	N.P.D.	Correction.
°	′	°	′
65	+ 0·36	135	+ 0·16
70	+ 0·17	140	− 0·05
75	+ 0·03	145	− 0·14
80	− 0·18	150	− 0·17
85	− 0·27	155	− 0·14
90	− 0·30	160	− 0·10
95	− 0·26	165	− 0·05
100	− 0·19	170	0·00
105	− 0·11	175	0·00
110	− 0·03	180	0·00

The Reflex observations having been thus reduced to the system of the Direct observations, all the N.P.D.'s were corrected for Flexure by the formula—

$$-0''\cdot46 \sin \zeta$$

where ζ is reckoned + when South.

After these corrections were applied, the D observations of Circumpolar Stars for Latitude were as follows :—

OBSERVATIONS OF CIRCUMPOLAR STARS FOR LATITUDE.

Number in Catalogue.	N.P.D. Above Pole.	N.P.D. Below	No. of Obs. Above.	No. of Obs. Below.	Below *minus* Above Pole.	Weight.
	180° — 175°.					
8	176° 40′ 45″·44	45″·09	5	8	− 0″·35	3·1
44	179 0 8·07	8·33	7	7	+ 0·26	3·5
92	176 19 53·33	53·24	9	11	− 0·09	5·0
156	175 20 59·64	60·14	8	15	+ 0·50	5·2
205	176 13 34·75	34·97	10	12	+ 0·22	5·5
210	178 53 34·80	34·88	5	3	+ 0·08	1·9
269	175 5 38·05	38·11	9	8	+ 0·06	4·2
284	175 35 58·86	59·34	11	15	+ 0·48	6·4
315	176° 31′ 20″·60	20″·24	6	5	− 0″·36	2·7
417	178 21 29·15	29·05	6	6	− 0·10	3·0
516	176 50 22·70	23·44	15	7	+ 0·74	4·8
563	178 31 56·45	56·18	8	6	− 0·27	3·4
645	175 12 3·20	3·42	13	9	+ 0·22	5·3
681	175 29 0·34	4·39	1	1	+[4·05]	0·5
682	175 29 1·28	1·97	7	5	+ 0·69	2·9
754	175 29 38·61	39·93	8	7	+ 1·32	3·7
	180° — 175°—*continued.*					

Observations of Circumpolar Stars for Latitude—*continued.*

Number in Catalogue.	N.P.D. Above Pole.	N.P.D. Below.	No. of Obs. Above.	No. of Obs. Below.	Below *minus* Above Pole.	Weight.
	180° — 175°—*continued.*					
	° ′ ″	″			″	
773	176 17 36·95	37·14	12	4	+ 0·19	3·0
893	179 10 4·48	4·55	14	11	+ 0·07	6·2
906	176 56 27·30	27·98	12	9	+ 0·68	5·1
927	175 11 43·45	43·65	18	9	+ 0·20	6·0
968	178 50 59·84	59·36	11	6	— 0·48	3·9
1005	177 40 35·87	35·58	13	12	— 0·29	6·2
1148	176 8 37·03	36·89	11	10	— 0·14	5·2
1194	177 16 30·78	31·13	2	5	+ 0·35	1·4
1226	175 9 49·38	49·47	6	9	+ 0·09	3·6
1259	177 39 37·56	38·38	5	9	+ 0·82	3·2
1304	179 16 16·75	17·02	7	7	+ 0·27	3·5
1456	179 22 59·45	60·61	4	7	+ 1·16	2·5
1562	176 33 2·57	2·44	13	14	— 0·13	6·7
1657	178 6 47·32	47·38	20	19	+ 0·06	9·8
1663	176 20 29·22	29·53	8	11	+ 0·31	4·6
1672	177 2 2·69	3·02	6	12	+ 0·33	4·0
	175° — 170°.					
19	172 51 48·14	48·84	12	10	+ 0·70	5·5
163	170 44 41·68	40·26	7	13	— 1·42	4·6
306	170 28 55·71	54·57	2	3	— 1·14	1·2
356	172 37 18·07	19·11	7	5	+ 1·04	2·9
367	173 59 11·29	11·76	6	5	+ 0·47	2·7
390	170 33 16·52	17·86	5	10	+ 1·34	3·3
396	174 50 19·57	20·56	12	4	+ 0·99	3·0
430	172 0 17·79	17·84	6	4	+ 0·05	2·4
465	170 41 26·44	27·49	9	6	+ 1·05	3·6
552	171 17 47·96	48·75	7	6	+ 0·79	3·2
595	170 32 9·48	10·93	15	9	+ 1·45	5·6
663	170 17 22·93	23·32	7	7	+ 0·39	3·5
672	170 25 26·68	27·36	17	11	+ 0·68	6·7
704	171 39 28·09	28·56	13	10	+ 0·47	5·7
785	173 58 30·53	30·56	17	12	+ 0·03	7·0
815	174 19 19·02	20·65	17	8	+ 1·63	5·4
827	174 50 59·16	59·11	14	13	— 0·05	6·7
846	174 59 28·96	29·90	18	9	+ 0·94	6·0
	175° — 170°—*continued.*					
898	174 29 53·55	54·29	13	12	+ 0·74	6·2
939	172 5 42·34	42·97	17	7	+ 0·63	5·0
978	173 8 20·91	20·92	17	12	+ 0·01	7·0
1030	172 34 28·57	29·41	18	12	+ 0·84	7·2
1077	174 4 41·35	41·16	17	11	— 0·19	6·7
1206	170 44 53·91	54·74	5	6	+ 0·83	2·7
1232	173 11 16·39	17·83	4	5	+ 1·44	2·2
1268	174 25 14·70	14·72	5	11	+ 0·02	3·4
1329	174 55 0·58	0·93	6	9	+ 0·35	3·6
1362	171 38 3·04	4·40	9	11	+ 1·36	5·0
1394	174 47 37·41	38·41	7	7	+ 1·00	3·5
1399	171 40 28·98	29·23	9	17	+ 0·25	5·9
1469	173 14 44·97	44·96	8	12	— 0·01	4·8
1616	174 20 30·79	30·85	7	8	+ 0·06	3·7
1623	171 59 0·82	1·48	7	10	+ 0·66	4·1
1647	170 6 2·21	3·35	7	10	+ 1·14	4·1
1682	174 30 5·18	5·70	12	13	+ 0·52	6·2
1685	172 39 28·27	28·23	11	17	— 0·04	6·7
1693	172 48 32·78	33·95	11	21	+ 1·17	7·2
	170° — 165°.					
68	167 54 7·35	7·48	9	18	+ 0·13	6·0
98	165 32 58·50	58·26	5	13	— 0·24	3·6
145	169 5 18·70	18·79	7	14	+ 0·09	4·7
171	168 54 37·88	37·92	7	10	+ 0·04	4·1
182	167 9 49·15	48·35	6	4	— 0·80	2·4
216	165 32 11·84	11·96	11	18	+ 0·12	6·8
234	169 25 31·56	31·00	8	11	— 0·56	4·6
242	167 48 27·88	28·07	3	3	+ 0·19	1·5
252	168 0 15·48	16·02	10	12	+ 0·54	5·5
287	168 56 25·81	25·83	7	8	+ 0·02	3·7
341	165 6 47·16	47·62	6	5	+ 0·46	2·7
400	169 22 47·33	48·58	5	5	+ 1·25	2·5
585	167 6 46·48	45·96	13	9	— 0·52	5·3
771	169 56 1·20	0·49	13	8	— 0·71	5·0

OBSERVATIONS OF CIRCUMPOLAR STARS FOR LATITUDE—*continued.*

Number in Catalogue.	N.P.D. Above Pole.	N.P.D. Below.	No. of Obs. Above.	No. of Obs. Below.	Below *minus* Above Pole.	Weight.
	170° — 165°—*continued.*					
824	165° 15′ 35″·30	35″·21	12	6	— 0″·09	4·0
840	167 34 52·66	52·77	19	9	+ 0·11	6·1
864	168 40 24·97	25·32	13	9	+ 0·35	5·3
914	167 50 10·03	10·17	22	8	+ 0·14	5·9
1111	167 41 7·40	7·65	7	6	+ 0·25	3·2
1132	168 24 11·30	12·10	6	2	+ 0·80	1·5
1144	168 38 9·54	9·67	8	7	+ 0·13	3·7
1157	167 16 24·82	24·60	8	6	— 0·22	3·4
1177	166 1 44·40	43·66	5	6	— 0·74	2·7
1433	167 27 36·34	37·01	9	14	+ 0·67	5·5
	170° — 165°—*continued.*					
1492	168° 12′ 39″·85	40″·08	11	15	+ 0″·23	6·4
1680	169 25 47·25	47·19	7	10	— 0·06	4·1
	165° — 160°.					
226	162 21 4·65	5·53	4	4	+ 0·88	2·0
273	164 35 28·54	27·17	3	6	— 1·37	2·0
829	164 35 21·35	20·73	3	5	— 0·62	1·9
1298	161 31 27·06	27·27	3	2	+ 0·21	1·5

The range of Polar Distance is quite insufficient to allow an independent discussion of the Refraction, and, therefore, we assume in the first place that the adopted Tabular Refractions (those of Bessel's *Tabulæ Regiomontanæ*) require no correction. On this assumption, having regard to the weights, we obtain :—

Correction to the assumed Colatitude = + 0″·15.

The following Table III. gives the combined effect of the corrections for Colatitude and Flexure :—

TABLE III.

COMBINED CORRECTION TO N.P.D. FOR FLEXURE AND ERROR OF ADOPTED COLATITUDE.

N.P.D.	Correction.	N.P.D.	Correction.	N.P.D. S.P.	Correction.
45°	+ 0′·60	115°	+ 0′·22		
50	+ 0·59	120	+ 0·18		
55	+ 0·58	125	+ 0·14		
60	+ 0·57	130	+ 0·10		
65	+ 0·55	135	+ 0·06		
70	+ 0·52	140	+ 0·02		
75	+ 0·50	145	— 0·02		
80	+ 0·47	150	— 0·05	°	′
85	+ 0·44	155	— 0·09	155	+ 0·31
90	+ 0·41	160	— 0·12	160	+ 0·30
95	+ 0·37	165	— 0·15	165	+ 0·29
100	+ 0·34	170	— 0·18	170	+ 0·27
105	+ 0·30	175	— 0·21	175	+ 0·25
110	+ 0·26	180	— 0·23	180	[+ 0·23]

In forming the N.P.D.'s for the General Catalogue the Reflex observations of N.P.D. were first reduced to the system of Direct observations by the corresponding corrections taken from Table II. The mean of the observations R and D so corrected was then taken, having regard to the number of observations of each, and the result was corrected for Flexure and Error of Colatitude by Table III. The N.P.D.'s thus found were transformed into the Declinations which are printed in the present Catalogue.

The Catalogue as it stands therefore represents the Declinations which would result from the following conditions :—

1. That the true Zenith Distances are obtained from the Direct observations corrected for Flexure by the formula

$$-\ 0''{\cdot}46 \sin \zeta.$$

2. That the Refractions of Bessel's *Tabulæ Regiomontanæ* represent the true Astronomical Refractions at the Cape.

The resulting Latitude is $-33^\circ\ 56'\ 3''{\cdot}35$.

It remains for discussion whether subsequent data obtained at the Cape and comparison with the Greenwich observations shew that the Declinations of the Catalogue require further systematic corrections.

Discussion of Flexure depending on cos ζ.

The general law of Flexure may, from mechanical considerations, be expressed with considerable certainty by—

$$a \sin \zeta + b \cos \zeta.$$

Observations with the Horizontal Collimators give directly the values of $2a$, but there are no data to determine b unless it be assumed that the irregular Meteorological conditions in the interior of the Observatory which give rise to the discordance R − D are symmetrical North and South of the Zenith, and the accuracy of the discussion in this way is also vitiated by the uncertainty as to the law of the R − D discordance.

In order to obtain an entirely independent value of b a number of pairs of Stars were observed in 1887–90, both with the Transit-Circle and the Zenith-Telescope. The Stars were selected in pairs like those employed for determining Latitudes by

Talcott's method, the components of each pair having a small difference of opposite Zenith-Distance, and differing sufficiently in Right Ascension to be both capable of observation with the Transit-Circle on the same night. Unfortunately, owing to the pressure of other work, it was not possible to make the observations simultaneously with both instruments ; but in every case only those Transit-Circle observations have been used in which both components of the pair were observed on the same night.

To eliminate as far as possible the inaccuracy which might arise from difference in the epochs at which the observations were made with the two instruments, the corrections for Proper Motion have, where possible, been determined and applied, and corrections have also been applied to the results for change of Latitude according to Chandler's formulæ.

The adopted value of a in the expression for the Flexure depends upon the following results, which represent the means of the weekly determinations of Flexure made with the Horizontal Collimators during the period over which the observations extend :—

Mean Value of the Horizontal Flexure-Correction.

Year.	a.	Difference from Mean.
	″	″
1887	— 0·328	— 0·025
1888	— 0·304	— 0·001
1889	— 0·285	+ 0·018
1890	— 0·286	+ 0·017
1891	— 0·314	— 0·011
Mean	— 0·303	

The following are the

Mean Values for each Month.

	Temperature F.	Mean Rainfall.	a.		Temperature F.	Mean Rainfall.	a.
	°	in.	″		°	in.	
January	71	0·7	— 0·250	July	56	3·5	— 0·323
February	70	0·7	— 0·303	August	57	3·1	— 0·350
March	69	0·8	— 0·254	September	59	2·1	— 0·361
April	65	1·7	— 0·265	October	63	1·6	— 0·361
May	60	3·6	— 0·333	November	68	1·0	— 0·263
June	57	4·6	— 0·313	December	70	0·6	— 0·261

There is a distinctly marked tendency to periodic change throughout the year, for we have

	a
May to October (cold and wet)	$-0''\cdot340$.
November to April (warm and dry)	$-0''\cdot266$.

It seems probable that this small change is the result of a sagging of the horizontal web, produced by the great increase of moisture in the winter months, rather than of a change in the rigidity of the metallic parts of the instrument, due to temperature.

The mean value of a is quite constant within the limits of the probable error of its determination, but differs markedly and persistently from the values of Horizontal Flexure found for the period 1881–85.

In 1885, however, after the observations of the present Catalogue were finished, a good many instrumental changes were made. The object-glass was sent home and re-polished, new steel screws were made to replace the easily worn gun-metal screws of the Circle-Microscopes, a new screw was also made for the eyepiece-micrometer, and the latter was thoroughly overhauled and put in order. The finder telescope was also removed (as it interfered with the symmetry of the instrument and was practically never used), and the counterpoising of the instrument was correspondingly re-adjusted.

These mechanical changes sufficiently account for the change of Flexure. For these reasons the observations made previous to 1885 February 6 are reduced with the Flexure Correction $-0''\cdot462 \sin \zeta$, those subsequent to that date with $-0''\cdot303 \sin \zeta$.

The results of the comparisons of the Zenith-Distances as measured with the Transit-Circle and with the Zenith-Telescope are given in the following Table. The observations in question were all made before the Zenith-Telescope was placed in Messrs. Repsold's hands for extensive alteration; the results since obtained are very much more accurate. But the faults of construction, which were detected and have been remedied, were of a kind only to produce accidental and not systematic errors.

Comparison of Zenith-Distances observed with Transit-Circle and Zenith-Telescope.

No. of Pair.	Stars.	Mean Z.D.	2 cos ζ	No. of Obs.		Excess of Z.D. (North—South).		Correction applicable to Transit-Circle Result.	
				T.C.	Z.T.	Transit-Circle.	Zenith-Telescope.	Without Chandler's Corrections.	With Chandler's Corrections.
		° ′				′ ″	′ ″	″	″
I.	Stone 247, O.A. 425	11 32	1·96	11	5	+ 8 39·52	+ 8 40·51	+0·99	+0·75
II.	Stone 599, Stone 647.....	3 7	2·00	9	6	— 3 49·19	— 3 48·33	+0·86	+0·68
III.	Stone 1556, Stone 1615	2 32	2·00	12	6	+ 4 20·33	+ 4 20·45	+0·12	+0·06
IV.	Stone 2015, B.D. + 5° 728.....	39 31	1·54	12	5	+ 1 36·90	+ 1 37·31	+0·41	+0·19
V.	Stone 2482, U.A. 45–58	13 36	1·94	12	6	— 2 31·40	— 2 30·97	+0·43	+0·13
VI.	U.A. 34–51, Stone 2700	3 14	2·00	12	5	+ 4 40·55	+ 4 40·78	+0·23	+0·03
VII.	Stone 3215, U.A. 41–87	13 48	1·94	17	6	+ 5 42·21	+ 5 42·51	+0·30	+0·20
VIII.	U.A. 55–129, Stone 3649	28 8	1·76	12	6	+ 2 15·97	+ 2 15·00	—0·97	—0·95
IX.	Stone 4147, U.A. 28–281	3 23	2·00	12	5	— 4 46·71	— 4 46·29	+0·42	+0·48
X.	B.D. — 1° 2130, Stone 4722...	32 27	1·69	12	6	— 0 30·03	— 0 30·58	—0·55	—0·37
XI.	Stone 5048, U.A. 40–159	27 14	1·77	12	5	— 0 26·94	— 0 27·25	—0·31	—0·09
XII.	Stone 5410, U.A. 37–40	1 20	2·00	13	6	—12 9·51	—12 9·31	+0·20	+0·26
XIII.	Stone 6039, U.A. 40–261	7 43	1·98	12	6	— 1 56·78	— 1 56·91	—0·13	—0·25
XIV.	B.D. — 1° 2151, Stone 6424...	32 22	1·69	12	6	— 5 35·00	— 5 35·03	—0·03	—0·09
XV.	Stone 7099, U.A. 50–99	25 42	1·80	15	6	—10 38·13	—10 38·42	—0·29	—0·29
XVI.	Stone 7467, U.A. 40–357	8 19	1·97	9	6	+ 6 3·36	+ 6 3·18	—0·18	—0·14
XVII.	Stone 8002, U.A. 43–18.....	13 7	1·95	12	6	— 5 40·85	— 5 40·34	+0·51	+0·35
XVIII.	Stone 8490, U.A. 43–107	21 11	1·86	12	6	+ 6 3·05	+ 6 2·97	—0·08	—0·12
XIX.	Stone 9055, U.A. 30–93.....	2 56	2·00	10	6	— 0 6·01	— 0 5·74	+0·27	+0·29
XX.	Stone 9887, Stone 9935	1 11	2·00	12	5	+ 1 34·67	+ 1 35·35	+0·68	+0·50
XXI.	U.A. 32–249, Stone 10752.....	3 3	2·00	12	7	+ 1 39·83	+ 1 39·16	—0·67	—0·73
XXII.	Lac. 8257, B.D. + 16° 4259...	50 52	1·26	17	6	+ 2 47·54	+ 2 46·82	—0·72	—0·72
XXIII.	Stone 11326, Stone 11376.....	4 16	1·99	12	6	+ 3 57·25	+ 3 57·43	+0·18	+0·04
XXIV.	Stone 11746, Stone 11786.....	3 39	2·00	12	6	+ 6 18·85	+ 6 18·40	—0·45	—0·49
XXV.	U.A. 35–32, Stone 12277	8 17	1·98	10	6	+ 6 15·61	+ 6 15·44	—0·17	—0·09
							Mean ...	+ 0·042	— 0·003

It is obviously unnecessary to discuss these observations further, the factor of the term of the Flexure depending on cos ζ being nearly 2, the term b would be $= -0''\cdot02$ if Chandler's terms for change of Latitude are neglected, or $= 0''\cdot00$ if they are taken into account. The Flexure is therefore quite symmetrical with respect to the Zenith.

It may be, however, of some interest to discuss the Cape Observations on precisely the same plan as the Greenwich Observations, that is to say, to find an expression of the form

$$x + y \sin \zeta$$

representing the R – D results, after the latter have been corrected for Flexure as found by the Horizontal Collimators.

The observations of R – D from Z.D. 0° to ±20°, however, are excluded, because within that zone the full aperture of the telescope is not available.

We have, therefore, the following equations to determine x and y, the absolute terms of the equations being taken from Table I., Column 9 :—

Group.		R – D.	Weight.	O – C.
		″		″
I.	$x - 0{\cdot}84\,y = -$	1·05	11·0	– 0·37
II.	$x - 0{\cdot}79\,y = -$	1·15	28·3	– 0·52
III.	$x - 0{\cdot}74\,y = -$	0·59	30·9	0·00
IV.	$x - 0{\cdot}67\,y = -$	0·41	35·4	+ 0·11
V.	$x - 0{\cdot}61\,y = -$	0·17	42·2	+ 0·30
VI.	$x - 0{\cdot}54\,y = -$	0·26	50·9	+ 0·14
VII.	$x - 0{\cdot}46\,y = -$	0·29	63·0	+ 0·04
VIII.	$x - 0{\cdot}39\,y = -$	0·35	45·6	– 0·09
XIV.	$x + 0{\cdot}39\,y = +$	0·50	27·1	+ 0·03
XV.	$x + 0{\cdot}47\,y = +$	0·69	15·5	+ 0·15
XVI.	$x + 0{\cdot}54\,y = +$	0·44	27·1	– 0·17
XVII.	$x + 0{\cdot}60\,y = +$	0·34	19·2	– 0·32
XVIII.	$x + 0{\cdot}69\,y = +$	0·76	37·2	+ 0·02
XIX.	$x + 0{\cdot}74\,y = +$	1·04	15·4	+ 0·25

Having regard to the weights the Normal Equations are—

$$447{\cdot}53\,x - 96{\cdot}66\,y = -\ 44{\cdot}52''$$
$$-\ 96{\cdot}66\,x + 157{\cdot}01\,y = +\ 136{\cdot}36$$

and

$$x = +\ 0{\cdot}102'' \quad \text{weight } 388$$
$$y = +\ 0{\cdot}931 \quad \text{,,} \quad 136$$

The corresponding corrections applicable to the observed Zenith-Distances are therefore—

$$+\ 0''{\cdot}05 + 0''{\cdot}47 \sin \zeta.$$

From the evidence of the Zenith-Telescope observations, however, it appears that the apparent dissymmetry of the measured Zenith Distances implied by the term + 0″·05 is more probably due to the irregular distribution of the heated air in the Observatory than to any instrumental error.

Discussion of the errors of the Refraction Tables.

For this discussion we have the following data :—

A. Observations of N.P.D. of Circumpolar Stars at Greenwich (Ten-Year Catalogue for 1880, p. 13).

B. Observations of N.P.D. of Circumpolar Stars at the Cape (contained in the Introduction to the present Catalogue, pp. xxii–xxiv).

C. Observations of Stars mutually visible at Greenwich and the Cape. (Greenwich Ten-Year Catalogue 1880, and Cape Catalogue 1885.)

Let Δ_u and Δ_l denote the observed N.P.D. at either observatory for upper and lower Culmination respectively,

Δ_g and Δ_c the observed N.P.D. at Greenwich and the Cape respectively (the latter being corrected by + 0″·15 for error of Colatitude),

R_u and R_l the Tabular Refraction at either observatory for upper and lower Culmination respectively,

R_g and R_c the Tabular Refraction at Greenwich and the Cape respectively.

Then assuming—

$$\text{Colatitude of Greenwich} = 38^\circ\ 31'\ 21''{\cdot}90 + X.$$
$$\text{True Refraction at Greenwich} = (\text{Tabular Refraction}) \times (1 - Y).$$
$$\text{Colatitude of Cape} = 123^\circ\ 56'\ 3''{\cdot}35 + x.$$
$$\text{True Refraction at Cape} = (\text{Tabular Refraction}) \times (1 - y).$$

The three classes of observations afford equations of the following forms :—

$$\text{A.} \quad \ldots \quad \ldots \quad 2X + (R_u + R_l)\,Y = \Delta_l - \Delta_u$$
$$\text{B.} \quad \ldots \quad \ldots \quad 2x - (R_u + R_l)\,y = \Delta_l - \Delta_u$$
$$\text{C.} \quad \ldots \quad \ldots \quad x - X + R_c y + R_g Y = \Delta_g - \Delta_c$$

GREENWICH N.P.D.

In discussing the observations it was intended to form the absolute terms of the equations on two distinct plans.

1. To assume that the N.P.D.'s should be reduced to the system $\frac{R + D}{2}$.

2. To reject the Reflex observations and reduce the results entirely on the assumption that the true Nadir-Point is given by the Nadir observations alone, and that the Flexure is represented by $a \sin \zeta + b \cos \zeta$, where a is determined by the Horizontal Collimators.

The Greenwich Ten-Year Catalogue represents the former assumption except in so far (as Professor Turner has shewn, *Monthly Notices*, Vol. LII., p. 374) that the combined effect of Flexure and R — D cannot be exactly represented in mean conditions by a term depending only on sin ζ. The results are however accepted as they stand.

The Greenwich Nadir-Point determinations are almost completely masked by combining them with Nadir-Points derived from Reflex and Direct observations of Stars; but it appears, from a discussion made at Greenwich in 1877 (Introduction to *Greenwich Observations* 1887, p. xlvii), "that the mean apparent correction to the Nadir observation as found from Reflexion observations of Stars is only + 0″·01." This may be accepted as a proof, in conjunction with the general result of Prof. Bakhuyzen's discussion (*Monthly Notices*, Vol. LI., p. 288) that the term of the Flexure depending on cos ζ is insensible.

The only existing determinations of the term a of the Flexure of the Greenwich Transit-Circle, previous to the perforation of the cube, are the following:—

Date	a	Mean.
1850 Dec. 30	+ 0″·41	+ 0″·50 adopted 1850–56.
1851 Feb. 5	+ 0·88	
1852 Dec. 23	+ 0·20	
1857 Jan. 5	+ 0·46	+ 0″·56 adopted 1857–64.
1857 Jan. 21	+ 0·66	
1860 Aug. 23	+ 0·92	
1860 Sept. 1	+ 0·67	Taken with special precaution, described as superior to any of the others.
1864 Sept. 7	+ 0·76	
Mean ...	+ 0″·62	

In addition to the proofs already quoted that the subsequent apparent change of sign of the Flexure has been produced solely by viewing one Collimator by the other through the 8 holes of sector-form cut through the tube of the Transit-Circle, Professor Bakhuyzen's paper on "Variations of Latitude deduced from the observations of Polaris made at Greenwich 1852–89" (*Monthly Notices*, Vol. LI., p. 286 *et seq.*) may be regarded as conclusive, for he shows beyond doubt, *loc. cit.* "that the piercing of the cube in 1865 had no appreciable influence on the results."

For the period covered by the Ten-Year Catalogue, and apart from small constant quantities applied in different years, which in the mean are nearly zero, the corrections depending on sin ζ, in the name of R − D, were (1880 Catalogue, p. 12)—

$$+ 1''{\cdot}225 \sin \zeta.$$

This corresponds in effect to a Flexure correction expressed by

$$+ 0''{\cdot}613 \sin \zeta$$

which agrees almost exactly with the mean of the only known reliable Flexure determinations, viz., those of 1850–64, quoted on p. xxxi, which give

$$+ 0''{\cdot}62 \sin \zeta.$$

Thus, whether the Greenwich observations are reduced to the system $\frac{R + D}{2}$ (neglecting the departure of the true R − D curve from the law of sin ζ), or whether they are reduced by the best independently known value of the Flexure, the results are practically the same.

The Greenwich N.P.D. observations are therefore taken as they stand from the Greenwich Ten-Year Catalogue.

TABLE A.—Greenwich Observations of Circumpolars.

N.P.D.—Lower *minus* Upper Culmination.

Rotation No.	Mean N.P.D.	Zenith Distance.		N.P.D. Lower—Upper.	Weight.
		Upper.	Lower.		
	° ′	° ′	° ′	″	
1	5 50	32 41	44 21	+ 0·15	156
2	10 47	27 44	49 18	+ 0·12	132
3	15 7	23 24	53 38	− 0·22	144
4	18 27	20 4	56 58	− 0·12	132
5	21 17	17 14	59 48	− 0·25	110
6	23 22	15 9	61 53	− 0·15	121
7	25 13	13 18	63 44	− 0·10	110
8	27 9	11 22	65 40	+ 0·24	100
9	28 49	9 42	67 20	+ 0·20	100
10	30 44	7 47	69 15	+ 0·66	81
11	33 36	4 55	72 7	+ 0·37	72
12	36 36	1 55	75 7	+ 0·51	49
13	40 12	1 41	78 43	+ 0·29	30

The weights have been reduced to correspond with the system of the Cape weights.

TABLE B.—Cape Circumpolar Observations.

N.P.D.—Lower *minus* Upper Culmination.

Rotation No.	Mean N.P.D.	Zenith Distance.		N.P.D. Lower *minus* Upper.		Weight.
		Upper.	Lower.	I.	II.	
	° ′	° ′	° ′	″	″	
14	177 30	53 34	58 34	− 0·10	− 0·98	137
15	172 30	48 34	63 34	+ 0·24	− 0·63	174
16	167 30	43 34	68 34	− 0·23	− 1·09	110
17	162 30	38 34	73 34	− 0·55	− 1·39	7

TABLE C.—Stars Common to Greenwich and Cape.

N.P.D.—Greenwich *minus* Cape.

Rotation No.	Mean N.P.D.	Zenith Distance.		N.P.D. Greenwich *minus* Cape.		Weight.
		Greenwich.	Cape.	I.	II.	
	° ′	°	° ′	″	″	
18	47 30	9	76 26	+ 1·45	+ 1·85	52
19	52 30	14	71 26	+ 0·72	+ 1·21	117
20	57 30	19	66 26	+ 0·39	+ 0·77	77
21	62 30	24	61 26	+ 0·41	+ 0·77	156
22	67 30	29	56 26	+ 0·60	+ 0·94	149
23	72 30	34	51 26	+ 0·38	+ 0·69	231
24	77 30	39	46 26	+ 0·52	+ 0·81	243
25	82 30	44	41 26	+ 0·67	+ 0·93	376
26	87 30	49	36 26	+ 0·35	+ 0·58	324
27	92 30	54	31 26	+ 0·47	+ 0·66	286
28	97 30	59	26 26	+ 0·56	+ 0·72	372
29	102 30	64	21 26	+ 0·80	+ 0·92	213
30	107 30	69	16 26	+ 0·67	+ 0·75	357
31	112 30	74	11 26	+ 0·79	+ 0·83	210
32	117 30	79	6 26	+ 0·82	+ 0·82	144

In Tables B and C the figures in Column I. represent for the Cape the unchanged N.P.D.'s of the present Catalogue. The figures in Column II. are formed on the assumption that the Cape N.P.D.'s should be reduced to the system $\frac{R + D}{2}$, that is to say, the further correction

$$+ 0''{\cdot}05 + 0''{\cdot}47 \sin \zeta$$

has been applied to the Cape N.P.D.'s of the present Catalogue.

Before forming the definite equations, however, it seemed desirable to examine the question of the Tabular Refraction.

The Refraction Tables employed at Greenwich are those of Bessel's *Tabulæ Regiomontanæ*, which are based on the Refractions of his *Fundamenta*. The theory of the latter is essentially that of Laplace, but the constant of Refraction employed by Laplace was increased by Bessel in the *Tabulæ Regiomontanæ* in the ratio of 1 : 1·003282, in accordance with the result of his discussion of Bradley's observations. Below 85° Z.D. the Refractions of the *Fundamenta* (increased as above) were found to be too great, and were empirically reduced in the *Tabulæ Regiomontanæ* to make them correspond with the results of observations of Stars at low altitudes made by Argelander at Abo.

The theory of Refraction has been more completely developed on various hypotheses since the days of Bessel. Radau in his "*Recherches sur la théorie des Refractions "Astronomiques"* (*Annales de l'Observatoire de Paris, Mémoires* Tome XVI.) shews (p. B 64) that the best modern Tables, though based on very different theories, are in close accord for Zenith-Distances less than 80°. Radau also shews (*loc. cit.*) that, within the same limit of Zenith-Distances, the Refractions according to his own theory are practically independent of Δt (the decrease of temperature per 1000 metres), at least within the most reasonable and probable limits of Δt. He also shews that, if in his theory Δt be assumed = 5° Cent., his Tabular Refractions agree for all Zenith-Distances with those of Gyldén.

The Pulkowa "*Tabulæ Refractionum*" are based on Gyldén's "*Untersuchungen über die Constitution der Atmosphäre und die Constitution der Atmosphäre und die Strahlenbrechung in derselben, St. Petersburg 1866*;" but Gyldén's original Refractions have been diminished in the proportion of 1 – 0·00124 : 1. It seems therefore desirable—

1. To confine the investigation, as we have done, to Zenith Distances not exceeding 80°; and then, if the results of both observatories can be satisfactorily reconciled by reasonable corrections to the constant of Refraction, to use the corrected places as common points of reference for the discussion of Refractions at greater Zenith Distances.
2. To compare the observations with the Pulkowa Tables as well as with the *Tabulæ Regiomontanæ*.

For the latter purpose a comparison between the two Tables has been made with the following results, and the absolute terms of the equations are given both for the *Tabulæ Regiomontanæ* and the Pulkowa Tables : —

Comparison of Refractions of the Tabulæ Regiomontanæ with the Pulkowa Refraction Tables (Edition of 1870).

(Barometer 30^{in}·00. Temperature 50° F.)

Z.D.	Mean Refraction.	Pulkowa *minus* Tab. Reg.
°	′	″
0	0	0·00
10	10	— 0·02
20	21	— 0·06
30	33	— 0·09
40	49	— 0·13
50	69	— 0·19
55	83	— 0·23
60	101	— 0·28
65	124	— 0·33
70	159	— 0·41
75	214	— 0·51
80	319	— 0·61

It will be observed that the difference between the two Tables cannot be rigorously represented by a simple multiple of the Refraction.

The absolute terms of the equations are thus given under four columns, viz.—

I. Refractions from Tabulæ Regiomontanæ : Cape Observations *not* corrected for R − D.

II. Refractions from Tabulæ Regiomontanæ : but Cape Observations corrected for R − D.

III. Pulkowa Refractions : Cape Observations *not* corrected for R − D.

IV. „ „ : but Cape Observations corrected for R − D.

Equations resulting from Observations of N.P.D. at Greenwich and the Cape.

Type A. Greenwich Circumpolars.

				I.	II.	III.	IV.	Weight.
				″	″	″	″	
(1)	2 X	+ 0·94 Y	=	+ 0·15	+ 0·15	− 0·11	− 0·11	156
(2)	2 X	+ 0·98 Y	=	+ 0·12	+ 0·12	− 0·14	− 0·14	132
(3)	2 X	+ 1·04 Y	=	− 0·22	− 0·22	− 0·50	− 0·50	144
(4)	2 X	+ 1·10 Y	=	− 0·12	− 0·12	− 0·43	− 0·43	132
(5)	2 X	+ 1·18 Y	=	− 0·25	− 0·25	− 0·57	− 0·57	110

TYPE A. GREENWICH CIRCUMPOLARS—*continued.*

				I.	II.	III.	IV.	Weight.
				″	″	″	″	
(6)	2 X	+ 1·25 Y	=	− 0·15	− 0·15	− 0·49	− 0·49	121
(7)	2 X	+ 1·31 Y	=	− 0·10	− 0·10	− 0·46	− 0·46	110
(8)	2 X	+ 1·40 Y	=	+ 0·24	+ 0·24	− 0·13	− 0·13	100
(9)	2 X	+ 1·49 Y	=	+ 0·20	+ 0·20	− 0·18	− 0·18	100
(10)	2 X	+ 1·61 Y	=	+ 0·66	+ 0·66	+ 0·25	+ 0·25	81
(11)	2 X	+ 1·84 Y	=	+ 0·37	+ 0·37	− 0·10	− 0·10	72
(12)	2 X	+ 2·18 Y	=	+ 0·51	+ 0·51	0·00	0·00	49
(13)	2 X	+ 2·85 Y	=	+ 0·29	+ 0·29	− 0·30	− 0·30	30

TYPE B. CAPE CIRCUMPOLARS.

(14)	2 x	− 1·73 y	=	− 0·10	− 0·98	+ 0·38	− 0·50	137
(15)	2 x	− 1·82 y	=	+ 0·24	− 0·63	+ 0·74	− 0·13	174
(16)	2 x	− 2·02 y	=	− 0·23	− 1·09	+ 0·30	− 0·56	110
(17)	2 x	− 2·40 y	=	− 0·55	− 1·39	+ 0·05	− 0·79	7

TYPE C. STARS COMMON TO GREENWICH AND CAPE.

(18)	x − X + 2·38 y	+ 0·09 Y	=	+ 1·45	+ 1·85	+ 0·89	+ 1·29	52
(19)	x − X + 1·77 y	+ 0·14 Y	=	+ 0·72	+ 1·21	+ 0·24	+ 0·73	117
(20)	x − X + 1·33 y	+ 0·20 Y	=	+ 0·39	+ 0·77	− 0·02	+ 0·36	77
(21)	x − X + 1·08 y	+ 0·26 Y	=	+ 0·41	+ 0·77	+ 0·05	+ 0·41	156
(22)	x − X + 0·88 y	+ 0·32 Y	=	+ 0·60	+ 0·94	+ 0·26	+ 0·60	149
(23)	x − X + 0·72 y	+ 0·40 Y	=	+ 0·38	+ 0·69	+ 0·07	+ 0·38	231
(24)	x − X + 0·62 y	+ 0·48 Y	=	+ 0·52	+ 0·81	+ 0·21	+ 0·50	243
(25)	x − X + 0·52 y	+ 0·56 Y	=	+ 0·67	+ 0·93	+ 0·36	+ 0·62	376
(26)	x − X + 0·42 y	+ 0·66 Y	=	+ 0·35	+ 0·58	+ 0·05	+ 0·28	324
(27)	x − X + 0·36 y	+ 0·80 Y	=	+ 0·47	+ 0·66	+ 0·15	+ 0·34	286
(28)	x − X + 0·28 y	+ 0·96 Y	=	+ 0·56	+ 0·72	+ 0·21	+ 0·37	372
(29)	x − X + 0·22 y	+ 1·19 Y	=	+ 0·80	+ 0·92	+ 0·42	+ 0·54	213
(30)	x − X + 0·18 y	+ 1·50 Y	=	+ 0·67	+ 0·75	+ 0·22	+ 0·30	357
(31)	x − X + 0·12 y	+ 2·01 Y	=	+ 0·79	+ 0·83	+ 0·26	+ 0·30	210
(32)	x − X + 0·06 y	+ 2·97 Y	=	+ 0·82	+ 0·82	+ 0·21	+ 0·21	144

Having regard to the weights the Normal Equations are—

					I.	II.	III.	IV.
+ 5023 x	+ 146 y	− 3308 X	+ 2986 Y	=	+ 1954	+ 1913	+ 1101	+ 1100
+ 146 x	+ 3031 y	− 1733 X	+ 895 Y	=	+ 1061	+ 2271	+ 7	+ 1218
− 3308 x	− 1733 y	+ 8663 X	+ 506 Y	=	− 1773	− 2479	− 1401	+ 2147
+ 2986 x	+ 895 y	+ 506 X	+ 6605 Y	=	+ 2132	+ 2536	+ 234	+ 638

Whence—

		I.	II.	III.	IV.		Weight.
x	=	+ 0·186	+ 0·114	+ 0·157	+ 0·096	...	1830
y	=	+ 0·218	+ 0·585	− 0·065	+ 0·303	...	2086
X	=	− 0·103	− 0·141	− 0·114	− 0·152	...	3765
Y	=	+ 0·217	+ 0·264	− 0·018	+ 0·024	...	3103

Thus, according to solutions I. and III.—

The Refractions of the *Tabulæ Regiomontanæ* require to be multiplied { at Greenwich by (1 − 0·00217) / at the Cape by (1 − 0·00218)

The Refractions of the Pulkowa Tables require to be multiplied { at Greenwich by (1 + 0·00018) / at the Cape by (1 + 0·00065)

On the other hand, according to solutions II. and IV.—

The Refractions of the *Tabulæ Regiomontanæ* require to be multiplied { at Greenwich by (1 − 0·00264) / at the Cape by (1 − 0·00585)

The Refractions of the Pulkowa Tables require to be multiplied { at Greenwich by (1 − 0·00024) / at the Cape by (1 − 0·00303)

But as the density of the air is measured by Mercurial Barometers, and as the effect of gravity on the mercurial column varies with the Latitude, it is necessary in comparing the corrections of the same Refraction Tables obtained at different observatories to take this variation of gravity into account. Professor Cleveland Abbé has drawn attention to this (*Ast. Nach.* 2761), and he gives a convenient table for the value of g at different latitudes.

Taking the value of g at Pulkowa as unity we derive for—

Greenwich $\phi = +\ 51\ 28{\cdot}6$; $g = 0{\cdot}99928$

Cape $\phi = -\ 33\ 56{\cdot}1$; $g = 0{\cdot}99775$

Let r be the mean Tabular Refraction computed from the readings of a Mercurial Barometer at any observatory.

R the Mean Tabular Refraction computed from the readings of an Aneroid Barometer, which, if compared at Pulkowa, would be without error.

Then, if the Pulkowa Tabular Refractions are correct, the true Mean Refraction at any other observatory will be

$$r = R\,g,$$

that is to say—

For Greenwich, $r = R\ (1 - 0{\cdot}00072)$.

For the Cape, $r = R\ (1 - 0{\cdot}00225)$.

According to solution III. the above Refractions have to be increased, so that the true Refractions become—

For Greenwich, $r\ (1 + 0{\cdot}00018) = R\ (1 - 0{\cdot}00054)$.

For the Cape, $r\ (1 + 0{\cdot}00065) = R\ (1 - 0{\cdot}00160)$.

Similarly, according to solution IV., the true Refractions are—

For Greenwich, $r\ (1 - 0{\cdot}00024) = R\ (1 - 0{\cdot}00096)$.

For the Cape, $r\ (1 - 0{\cdot}00303) = R\ (1 - 0{\cdot}00528)$.

Thus, if solution IV. were correct the Refractions of the Pulkowa Tables require to be diminished $\frac{1}{1000}$ part to represent the Refractions at Greenwich, and $\frac{1}{200}$ part to represent the Refractions at the Cape.

This most improbable result is due to the employment of the correction $\frac{R-D}{2}$ applied experimentally to test the legitimacy of the process.

On the other hand, when the Cape observations are reduced so that (by the results of a curve drawn through the values of D – R) the R observations are corrected to D, and the latter are then corrected for Flexure as determined by the collimators,

we obtain corrections to the Pulkowa Tables for the Refractions at Greenwich and the Cape which agree with each other within limits that may be explained by local causes, such as the difference of the mean excess of the temperature of each observatory over that of the outer air.

But the reasons for rejecting the method of reducing the observations to the mean of the R and D results do not rest alone on the result of this discussion.

For the Cape observations

the Flexure correction is	$- 0''{\cdot}46 \sin \zeta$
the conventional $\frac{R - D}{2}$ correction is	$+ 0''{\cdot}05 + 0''{\cdot}47 \sin \zeta$
The sum of these corrections is	$+ 0''{\cdot}05 + 0''{\cdot}01 \sin \zeta$

In other words, the reduction by the Greenwich method corresponds for the Cape Transit-Circle with an assumption that its true Horizontal Flexure is zero, whereas it is shewn by the collimators to be $- 0''{\cdot}46 \pm 0''{\cdot}02$.

In the Cape Transit-Circle the collimators view each other through a clear aperture in the cube, so that the instrumental result for Horizontal Flexure is unquestionably correct within insignificant limits.

At Greenwich the correction $\frac{R - D}{2} \sin \zeta$ (when the Flexure is assumed zero) corresponds exactly with the mean of the only existing unobjectionable determinations of Flexure, although there is also a true R – D correction of a persistent mean character which, as Professor Turner has shewn (*Monthly Notices* R.A.S., LII., pp. 374–78), has also a periodic variation depending on the season of the year.

This variation points still more clearly to the true origin of the R – D discordance, viz.: the arrangement of the layers of air of different temperatures within the Transit-Room. The far greater amount of the R – D discordance at the Cape seems to be due to several causes :—

1. The shutter openings are only 2 feet wide, instead of 3 feet as at Greenwich.
2. The walls are much thicker, and thus probably retain heat much longer.
3. The walls and roof are more heated by sunshine, which is far stronger and more persistent than at Greenwich.

It should be mentioned, however, that the residuals of the four solutions are very nearly the same, as will be seen from the following Tables :—

The corrections applicable to the N.P.D.'s of the Catalogues under discussion are, according to the different solutions,—

Corrections to N.P.D. of Greenwich Ten-Year Catalogue for 1880.					Corrections to N.P.D. of Cape Catalogue for 1885.				
N.P.D.	I.	II.	III.	IV.	N.P.D.	I.	II.	III.	IV.
°	′	′	′	′	°	′	′	′	′
− 45	−0·93	−1·11	−0·48	−0·64	45	+0·82	+1·39	+0·56	+1·15
− 40	−0·50	−0·60	−0·42	−0·50	50	+0·62	+0·88	+0·52	+0·70
− 35	−0·32	−0·37	−0·33	−0·38	55	+0·51	+0·60	+0·45	+0·55
− 30	−0·22	−0·25	−0·24	−0·26	60	+0·44	+0·43	+0·40	+0·40
− 25	−0·15	−0·17	−0·18	−0·19	65	+0·40	+0·32	+0·37	+0·30
− 20	−0·10	−0·11	−0·13	−0·14	70	+0·36	+0·25	+0·33	+0·23
− 15	−0·07	−0·07	−0·09	−0·09	75	+0·33	+0·20	+0·29	+0·18
− 10	−0·04	−0·03	−0·05	−0·04	80	+0·31	+0·17	+0·27	+0·14
− 5	−0·02	0·00	−0·03	−0·01	85	+0·29	+0·14	+0·26	+0·12
0	0·00	−0·02	0·00	−0·02	90	+0·27	+0·13	+0·24	+0·11
+ 5	−0·02	−0·04	−0·02	−0·04	95	+0·26	+0·12	+0·23	+0·11
+ 10	−0·03	−0·06	−0·04	−0·06	100	+0·24	+0·12	+0·21	+0·10
+ 15	−0·05	−0·07	−0·05	−0·08	105	+0·23	+0·13	+0·20	+0·11
+ 20	−0·06	−0·09	−0·07	−0·10	110	+0·22	+0·13	+0·19	+0·12
+ 25	−0·07	−0·10	−0·09	−0·12	115	+0·21	+0·14	+0·17	+0·12
+ 30	−0·08	−0·12	−0·10	−0·13	120	+0·20	+0·16	+0·16	+0·14
+ 35	−0·09	−0·13	−0·11	−0·14	125	+0·18	+0·17	+0·16	+0·15
+ 40	−0·11	−0·14	−0·12	−0·16	130	+0·17	+0·18	+0·15	+0·17
+ 45	−0·12	−0·16	−0·12	−0·16	135	+0·16	+0·19	+0·14	+0·18
+ 50	−0·13	−0·17	−0·14	−0·18	140	+0·15	+0·20	+0·13	+0·19
+ 55	−0·14	−0·19	−0·16	−0·20	145	+0·14	+0·20	+0·11	+0·19
+ 60	−0·15	−0·20	−0·17	−0·22	150	+0·12	+0·21	+0·11	+0·19
+ 65	−0·17	−0·22	−0·19	−0·24	155	+0·11	+0·20	+0·09	+0·19
+ 70	−0·18	−0·24	−0·20	−0·26	160	+0·09	+0·20	+0·07	+0·19
+ 75	−0·20	−0·26	−0·22	−0·28	165	+0·07	+0·18	+0·05	+0·16
+ 80	−0·21	−0·28	−0·25	−0·30	170	+0·05	+0·15	+0·03	+0·13
+ 85	−0·24	−0·30	−0·27	−0·34	175	+0·03	+0·11	0·00	+0·09
+ 90	−0·26	−0·33	−0·30	−0·37	180	0·00	+0·05	−0·03	+0·07
+ 95	−0·29	−0·37	−0·34	−0·41	185	+0·04	+0·04	+0·07	+0·05
+ 100	−0·34	−0·42	−0·39	−0·47	190	+0·10	+0·17	+0·10	+0·16
+ 105	−0·39	−0·49	−0·44	−0·53	195	+0·18	+0·37	+0·16	+0·35
+ 110	−0·48	−0·59	−0·51	−0·62	200	+0·32	+0·73	+0·22	+0·63
+ 115	−0·62	−0·77	−0·60	−0·74					
+ 120	−0·91	−1·12	−0·70	−0·89					

REPRESENTATION OF THE VARIOUS SOLUTIONS FOR DETERMINING THE ERRORS DEPENDING ON LATITUDE AND REFRACTION IN THE GREENWICH CATALOGUE FOR 1880 AND THE CAPE CATALOGUE FOR 1885.

Equation.	I. O — C.	II. O — C.	III. O — C.	IV. O — C.	Weights.
		GREENWICH CIRCUMPOLARS.			
	″	″	″	″	
(1)	+ 0·15	+ 0·18	+ 0·14	+ 0·17	156
(2)	+ 0·11	+ 0·14	+ 0·11	+ 0·14	132
(3)	— 0·24	— 0·21	— 0·25	— 0·22	144
(4)	— 0·15	— 0·13	— 0·18	— 0·15	132
(5)	— 0·30	— 0·28	— 0·32	— 0·29	110
(6)	— 0·22	— 0·20	— 0·24	— 0·22	121
(7)	— 0·18	— 0·16	— 0·21	— 0·19	110
(8)	+ 0·14	+ 0·15	+ 0·12	+ 0·14	100
(9)	+ 0·08	+ 0·09	+ 0·08	+ 0·09	100
(10)	+ 0·52	+ 0·52	+ 0·51	+ 0·52	81
(11)	+ 0·18	+ 0·17	+ 0·16	+ 0·16	72
(12)	+ 0·24	+ 0·22	+ 0·27	+ 0·25	49
(13)	— 0·12	— 0·18	— 0·02	— 0·06	30
		CAPE CIRCUMPOLARS.			
(14)	— 0·08	— 0·19	— 0·05	— 0·17	137
(15)	+ 0·26	+ 0·20	+ 0·31	+ 0·23	174
(16)	— 0·17	— 0·15	— 0·15	— 0·14	110
(17)	— 0·40	— 0·22	— 0·42	— 0·25	7
		GREENWICH AND CAPE.			
(18)	+ 0·62	+ 0·18	+ 0·78	+ 0·32	52
(19)	+ 0·01	— 0·12	+ 0·09	— 0·06	117
(20)	— 0·23	— 0·32	— 0·20	— 0·30	77
(21)	— 0·17	— 0·19	— 0·15	— 0·17	156
(22)	+ 0·05	+ 0·09	+ 0·05	+ 0·08	149
(23)	— 0·15	— 0·09	— 0·15	— 0·10	231
(24)	— 0·01	+ 0·06	— 0·01	+ 0·05	243
(25)	+ 0·15	+ 0·22	+ 0·13	+ 0·20	376
(26)	— 0·17	— 0·10	— 0·18	— 0·11	324
(27)	— 0·07	— 0·02	— 0·08	— 0·04	286
(28)	0·00	+ 0·05	— 0·03	+ 0·01	372
(29)	+ 0·20	+ 0·22	+ 0·18	+ 0·20	213
(30)	+ 0·02	— 0·01	— 0·01	— 0·04	357
(31)	+ 0·04	— 0·03	+ 0·03	— 0·03	210
(32)	— 0·13	— 0·25	0·00	— 0·13	144

From these residuals we have :—

	I.	II.	III.	IV.
$\frac{[pvv]}{n-m}$ =	5·27	5·02	5·76	4·78
Probable Error of one observation of weight *unity*.	± 1″·53	± 1″·49	± 1″·60	± 1″·46

Now weight *unity* was computed to correspond with an estimated probable error of ± 0″·50, whereas the value comes out in all cases about three times as great. This points clearly to large systematic errors of which no account has been taken ; indeed, apart from such errors, very few of the residuals ought to exceed ± 0″·10, as the theoretical probable error of most of the equations, derived from the agreement of the results *inter se*, is less than ± 0″·05.

Having regard to the accuracy with which the division-errors of the circles have been determined both at Greenwich and the Cape, it is impossible to explain the origin of the change of sign in the absolute terms of the equations from No. 3 onwards to No. 7, and the succeeding change of sign at No. 8 in the Greenwich observations of Circumpolars, or the change of sign of No. 15 in the Cape observations of Circumpolars by any unknown error of graduation.

A far more probable origin of these discrepancies is to be found in the effect of the heated air in the interior of the Observatory. At Greenwich, for example, the rays of most Stars of the two first groups enter the Transit-Room by the horizontal shutters ; for groups 3 to 7 the rays at upper transit enter the horizontal shutters, but at lower transit the vertical shutter ; from group 8 onwards, the rays at lower transit enter the vertical shutter below the level of the brick walls, where the interior air is probably warmer than that included between the sloping part of the roof. At the Cape the rays of Stars included in group 14 enter the horizontal shutters both at upper and lower transit, whilst in group 15 the rays from Stars at upper transit enter the horizontal shutters, and at lower transit the vertical shutter. If, therefore, the temperature of the air inside the Observatory be different from that of the external air, we have, in the different angles of incidence into this heated medium, a sufficient explanation of the systematic errors in question.

To enable the reader to judge of the relevancy of these remarks the following discussion of the Cape Thermometer readings may be useful :—

During the directorate of Sir Thomas Maclear and Mr. Stone, the thermometer used for the computation of Refraction was placed in a crib fixed outside the S.W. window of the Transit-Room, so that it could be read through the window. By comparison with thermometers in a properly ventilated screen placed on the lawn at the height of the pivots of the Transit-Circle, and 65 feet to the South of the Southern Transit opening, it was found that, in consequence of radiation from the walls of the Observatory, the thermometer readings of the window-crib were, on the average, 1°·0 too high at 10 p.m. (See *Quarterly Journal of the Royal Meteorological Society* for October 1882, and *Introduction to the Cape Meridian Observations* 1879–81, p. xxix.) The thermometers, both in the window-crib and screen, were regularly recorded in order to ascertain their systematic differences.

In May 1884 a thermometer was mounted to the South-west of the Observatory building on a site where a still more perfect circulation of the air could be secured (at the Cape the winds are almost invariably either S.E. or N.W.). In September 1884 thermometers were also suspended at points in a plane 2 feet East of that described by the collimation-axis of the Transit-Circle, and at the same distance and altitude from the axis as the object-glass when the instrument is directed to 70° Z.D. North, to 70° Z.D. South, and to the Zenith. These thermometers are subsequently described as North, South, and Top, respectively.

The separate readings of the thermometers will be found in the Introduction to the *Cape Meridian Observations* 1882–85, pp. 84–135, for the whole period covered by the N.P.D. observations of the present Catalogue, viz., 1880 March 31, to 1885 February 3.

To render the discussion more complete, the thermometer readings 1886–88 have been included, and the results are given below. All observations made by day are excluded, because the Catalogue places depend almost entirely on observations made by night, and the relation of external to internal temperature is reversed by day.

The Barometer is fixed to the south wall of the Transit-Room, the bulb of its attached thermometer is plunged in the mercury-cistern of the Barometer, and is 4 feet west of the centre of the transit-opening, and 2 feet below the level of the transit-axis.

TABLE SHEWING THE MEAN EXCESS OF THE VARIOUS THERMOMETER-READINGS OVER THE TEMPERATURE OF THE EXTERNAL AIR AS DETERMINED BY A THERMOMETER IN A STEVENSON-SCREEN NEAR THE S.W. CORNER OF THE OBSERVATORY BUILDING.

(*From observations at night only.*)

	Thermometers inside Transit-Room.				Window-Crib.	Lawn.
	Attached.	North.	Top.	South.		
January	+ 3°·8 F.	+ 2°·6 F.	+ 2°·4 F.	+ 2°·3 F.	+ 0°·7 F.	− 0°·1 F.
February	+ 4·0	+ 2·5	+ 2·4	+ 2·6	+ 0·7	+ 0·7
March	+ 3·5	+ 2·4	+ 2·2	+ 2·1	+ 0·8	...
April	+ 3·2	+ 2·3	+ 2·1	+ 1·9	+ 1·1	...
May	+ 3·5	+ 2·6	+ 2·4	+ 2·1	+ 1·2	− 0·4
June	+ 2·9	+ 2·4	+ 2·2	+ 1·7	+ 1·4	0·0
July	+ 2·9	+ 2·4	+ 2·1	+ 1·7	+ 1·1	− 0·6
August	+ 2·6	+ 2·1	+ 1·8	+ 1·5	+ 1·1	− 0·2
September	+ 2·8	+ 2·0	+ 1·8	+ 1·6	+ 0·9	− 0·2
October	+ 4·1	+ 3·0	+ 2·9	+ 2·2	+ 1·0	− 0·1
November	+ 3·5	+ 2·4	+ 2·2	+ 1·9	+ 0·9	− 0·2
December	+ 3·7	+ 2·6	+ 2·4	+ 2·0	+ 0·7	+ 0·1
Means	+ 3·38	+ 2·44	+ 2·24	+ 1·97	+ 0·97	− 0·10

These results are all corrected for the index-errors of the thermometers employed.

It is evident from the above—

1. That for observations at night the temperatures recorded in the window-crib are in the mean too high by 1°·0, in consequence of radiation of heat from the walls of the building.
2. That the temperature of the air in the immediate neighbourhood of the object-glass, notwithstanding the free draught of air in the room, is on the average, for night observations, about 2°·2 higher than that of the external air.
3. That this excess of internal temperature is rather greater towards the North than towards the South, probably because the North wall is exposed to the direct rays of the Sun, and it thus absorbs more heat during the day than the South wall.
4. That below the level of the bottom of the vertical shutter opening, the internal temperature (as shewn by the attached thermometer) is on the average 3°·4 higher at night than the external temperature.
5. That there is no practical difference between the temperature of the air at night, as shewn by the external thermometer, whether it is mounted on the lawn or at the South-West corner of the Observatory.

That somewhat similar conditions exist at Greenwich is shewn by Table III. of Professor Turner's paper, *On the distribution of Temperature in the Transit-Circle Room at the Royal Observatory Greenwich* (*Monthly Notices*, Vol. LII., p. 426). Having regard to these facts it is not difficult to assign a probable source of the systematic errors in the observations both at Greenwich and at the Cape on the grounds already stated. To this source of error may be added the possibility of small errors of Flexure of the tube and circle which do not follow the adopted law of sin ζ, and for the detection or elimination of which no means exist at either observatory.

Rejecting, therefore, the system of correction to $\frac{R + D}{2}$, and adopting as definitive the results of solution I., and dividing the results according to Right Ascension as well as Declination, we get for the Stars observed both at Greenwich and the Cape the following results, which do not exhibit any well marked periodic character in the Refraction depending on the seasons :—

Representation of Solution I. for Stars observed both at Greenwich and the Cape.

N.P.D.—Greenwich *minus* Cape.

N.P.D.	h h 0—3	h h 3—6	h h 6—9	h h 9—12	h h 12—15	h h 15—18	h h 18—21	h h 21—0
° °	″	″	″	″	″	″	″	″
45—50	...	+ 0·65	...	+ 0·77	− 0·65	+ 0·14	+ 1·06	+ 1·05
50—55	− 0·30	+ 0·10	...	− 0·17	+ 0·32	+ 0·25	− 0·33	+ 0·25
55—60	− 1·53	− 1·05	+ 0·49	+ 0·41	− 0·40	− 0·17	− 0·17	− 0·67
60—65	− 0·72	+ 0·24	+ 0·23	+ 0·46	− 0·12	− 0·27	− 0·41	− 0·37
65—70	+ 0·14	− 0·20	+ 0·58	+ 0·19	...	− 0·82	− 0·16	− 0·64
70—75	− 0·66	− 0·39	+ 0·02	+ 0·13	− 0·35	− 0·35	+ 0·28	+ 0·13
75—80	− 0·29	− 0·02	+ 0·11	+ 0·10	0·00	− 0·10	0·00	+ 0·01
80—85	+ 0·25	+ 0·30	+ 0·01	+ 0·14	− 0·35	− 0·07	+ 0·17	+ 0·34
85—90	− 0·17	+ 0·30	+ 0·10	− 0·29	− 0·28	− 0·21	− 0·04	− 0·26
90—95	+ 0·20	+ 0·08	− 0·26	− 0·30	− 0·18	− 0·16	− 0·01	− 0·04
95—100	+ 0·01	+ 0·31	+ 0·19	− 0·22	− 0·21	+ 0·01	− 0·10	− 0·04
100—105	+ 0·39	+ 0·55	+ 0·51	+ 0·30	0·00	− 0·15	− 0·15	+ 0·22
105—110	+ 0·18	+ 0·50	+ 0·17	+ 0·10	− 0·24	− 0·15	+ 0·25	− 0·11
110—115	+ 0·32	+ 0·07	+ 0·37	− 0·15	+ 0·02	− 0·24	− 0·36	+ 0·49
115—120	+ 0·38	− 0·03	+ 0·04	− 0·18	+ 0·54	− 0·74	− 0·25	+ 0·24

As an independent control on the system of Declinations a number of pairs of Stars was selected for observation with the Zenith-Telescope, and a list of these pairs was forwarded to Dr. Otto Struve with a request that the Northern Stars of the list should be observed at Pulkowa, either by referring them to the Pulkowa Standard Stars with the Transit-Circle, or observing them fundamentally with the Vertical-Circle.

Dr. Struve expressed the opinion that for such work he considered the Vertical Circle should be employed, that Dr. Nyrén was unable to undertake observations of the complete list with the Vertical Circle, but had promised to observe a list of 22 Stars of special importance, and he hoped that Dr. Romberg would be able to observe the others with the Transit-Circle.

These 22 Northern Stars were selected in such a way that for each of eleven Southern Circumpolars there should be one Northern Star forming a Talcott-Latitude pair with it at upper and another at lower culmination. The 22 Talcott pairs thus formed were observed with the Zenith-Telescope at the Cape, and the 22 Northern Stars were observed by Dr. Nyrén with the Vertical-Circle at Pulkowa. The results of Dr. Nyrén's observations were kindly communicated by him on the 9th March 1889, and are also published in the *Astronomische Nachrichten*, No. 2904.

In the mean of two Latitude pairs, in one of which the South component is a Circumpolar Star at upper transit and in the other pair the Southern Star is the same circumpolar at lower transit, it is clear that the mean Declination of the South Stars (apart from change of Latitude between the observation of the two pairs) must be rigorously = 90°. The deduced Latitude from pairs thus combined will therefore rest entirely on the Pulkowa Declinations, and be independent of errors in the assumed places of the Southern Circumpolars.

The following are the mean results ; they are based on four observations of each Northern Star at Pulkowa, and on 10 to 12 observations of each pair with the Zenith-Telescope at the Cape. The Cape Observations extend from 1886 to 1891, and the effect of change of Latitude is practically eliminated, as is shewn by the results with and without Chandler's corrections for change of Latitude :—

LATITUDE OF THE CAPE ZENITH-TELESCOPE, DETERMINED BY TALCOTT OBSERVATIONS.*

South Star.	North Star.	Excess of North Z.D. 1887·0.	Resulting Latitude.	
			Without Chandler's Corrections.	With Chandler's Corrections.
		″	° ′ ″	″
Brisbane 4091 S.P.	Pulk. (1855) 115	+ 229·04	— 33 56 3·58	3·57
Brisbane 4091	Pulk. (1855) 1829	— 501·03		
Stone 7461 S.P.	W_2. 1^h·758–60	+ 345·30	— 33 56 3·36	3·34
Stone 7461	Pulk. (1855) 1927	+ 517·07		

* The Zenith-Telescope is mounted in a detached observatory (a light framework covered by a single sheet of painted canvas) 200 feet West of, and exactly in the same geodetic latitude as, the Transit-Circle.

LATITUDE OF THE CAPE ZENITH-TELESCOPE, DETERMINED BY TALCOTT OBSERVATIONS—*continued.*

South Star.	North Star.	Excess of North Z.D. 1887·0.	Resulting Latitude.	
			Without Chandler's Corrections.	With Chandler's Corrections.
		"	° ′ "	"
Lacaille 1848	Pulk. (1855) 475	− 50·76	− 33 56 3·62	3·63
Lacaille 1848 S.P.	Pulk. (1855) 2202	− 383·19		
Stone 9273 S.P.	Arm_2. 573	+ 503·25	− 33 56 3·63	3·61
Stone 9273	Pulk. (1855) 2483	− 254·21		
Lacaille 1839	Pulk. (1855) 732	− 307·52	− 33 56 4·01	4·01
Lacaille 1839 S.P.	Pulk. (1855) 2417	− 9·06		
Stone 2901	Pulk. (1855) 1052	+ 264·89	− 33 56 3·74	3·72
Stone 2901 S.P.	Pulk. (1855) 2603	+ 67·07		
σ Octantis S.P.	Pulk. (1855) 1148	− 201·22	− 33 56 3·81	3·82
σ Octantis	Pulk. (1855) 2706	+ 423·58		
A Octantis	Pulk. (1855) 1196	− 492·94	− 33 56 3·45	3·43
A Octantis S.P.	Lalande 37406–7	− 48·63		
τ Octantis S.P.	Arm_2. 1259	− 91·51	− 33 56 3·46	3·45
τ Octantis	Arm_2. 3116	+ 279·08		
Lacaille 4578	W_2. 10^h·1118	− 313·33	− 33 56 3·79	3·76
Lacaille 4578 S.P.	Arm_2. 3084	− 127·62		
Stone 6404	Pulk. (1855) 1719	+ 118·21	− 33 56 3·86	3·83
Stone 6404 S.P.	Pulk. (1855) 3403	− 80·61		
		Mean	− 33 56 3·66	3·65
		Probable Error	± 0·04	± 0·04

The Latitude resulting from the Meridian Observations :—

Solution I. is − 33 56 3·54

Probable error ± 0·04

This discordance of 0″·11 between the Latitudes of the Cape deduced on the one hand by Zenith-Telescope observations at the Cape, combined with Vertical Circle observations at Pulkowa, and on the other hand from Transit-Circle observations at Greenwich and the Cape, may be due in great part to the accidental errors of the various operations involved. But as the Pulkowa observations extend over a short period of time, it is possible that the results may, to a sensible extent, be affected, even in the mean, by change of Latitude. It is also possible, having regard to the considerable systematic errors exhibited by the residuals in the circumpolar observations, both at Greenwich and the Cape, that the mean values of the Latitudes of both Observatories may be sensibly affected by the systematic difference between the external and internal temperature, and by the irregular distribution of temperature within the Observatory itself.

The general conclusions which result from this discussion are :—

1. That no results of the highest refinement, either in Right Ascension or Declination, can be obtained with a non-reversible instrument.

2. That if the errors of the micrometer-screws and the division-errors of circles are accurately known, the employment of Reflex observations tends to increase the systematic errors of the resulting Declinations, unless the external and internal temperatures are perfectly equalized.

3. That even Direct observations are materially affected by the difference between internal and external temperature, for in no other way can the outstanding errors of the Greenwich and Cape Circumpolar observations be explained.

4. That to minimize such errors the construction of the observatory should be perfectly symmetrical with the instrument, that is to say, the roof should be a semi-cylinder whose axis is concentric with that of the Transit-Circle. The roof and walls of the observatory should be made of double sheets of iron, with a well ventilated air-space between the sheets, and the whole should be protected from direct sunshine by louvres (say of sheet-iron, painted white). The observing opening should be as large as can be conveniently employed. The observatory should be raised by pillars a few feet from the ground to allow free circulation of air underneath, and the floor be made of thin ribbed iron plate, such as is used in the engine-rooms of steam ships.

Several of these conclusions have been already anticipated in the Introduction to the *Cape Meridian Observations* 1879–81, p. xxx.

The systematic corrections contained in the Tables facing page 1 should be applied to the Catalogue, but except for the discussion of Refractions at low altitudes, it is not desirable to use the Catalogue places North of Declination + 40°.

INTRODUCTION TO APPENDIX I. (p. 101).

Results of Fundamental Observations of Southern Circumpolars.

In the Southern Hemisphere the nearest Star to the Pole which can be observed in daylight at lower transit is β Hydri, and its Polar Distance of 12° is much greater than is desirable for the accurate determination of fundamental Azimuths It is therefore necessary, during the winter months, to begin observing Circumpolar Stars as early as possible in the evening twilight, and again to observe the same Stars at opposite culmination in the early morning. This was done in the years 1881, 1882, 1884, 1886 and 1887.

Except for σ Octantis it was not found possible to obtain double transits of close Circumpolars between $5^{h.}$ to $7^{h.}$ of R.A. and between $17^{h.}$ and $19^{h.}$ of R.A. In 1888 observations were made to determine the positions of the outstanding Circumpolars by single transits, the Azimuth of the Transit-Circle being derived from observations of four Circumpolar Stars on each night (two above and two below pole) whose places had been fundamentally determined in the immediately preceding years.

The results of all the Fundamental observations of Circumpolar Stars thus obtained are given in this Appendix, and they have been employed as the basis of the Azimuths of the Meridian Observations for the Cape General Catalogue 1890. In general, the N.P.D.'s of this Catalogue are independent of error of Latitude, because they rest on an equal number of observations at upper and lower transit (in some cases on three or more consecutive transits). When the N.P.D. does not rest exclusively on consecutive upper and lower transits, the result is given to one place of decimals only and the Mean Date is included in brackets, and is merely taken from the General Catalogue.

INTRODUCTION TO APPENDIX II. (p. 105).

Meridian Observations of α *and* β *Centauri.*

These observations were made solely for the purpose of providing data to determine the motions of α_2 and α_1 Centauri relative to β Centauri. The observations have simply been abstracted from the journals and reduced to 1885·0 without corrections for Orbital Motion, Proper Motion, Parallax, Flexure, or error of Latitude.

DAVID GILL.

Royal Observatory, Cape of Good Hope,
1894 July 1.

SYSTEMATIC CORRECTIONS WHICH SHOULD BE APPLIED TO THE CAPE CATALOGUE FOR 1885·0.

Corrections applicable to the Right Ascensions.

Argument, "Star's Magnitude."

Magnitude	1	Correction	+ 0ˢ·030
,,	2	,,	+ 0·020
,,	3	,,	+ 0·012
,,	4	,,	0·000
,,	5	,,	— 0·013
,,	6	,,	— 0·024
,,	7	,,	— 0·034
,,	8	,,	— 0·043
,,	9	,,	— 0·050

Corrections applicable to the Declinations.

Argument, "Star's Declination."

Star's Dec.	Correction.	Star's Dec.	Correction.	For Mean of Upper and Lower Transits.*
°	″	°	″	″
+ 45	— 0·82	— 35	— 0·18	...
+ 40	— 0·62	— 40	— 0·17	...
+ 35	— 0·51	— 45	— 0·16	...
+ 30	— 0·44	— 50	— 0·15	...
+ 25	— 0·40	— 55	— 0·14	...
+ 20	— 0·36	— 60	— 0·12	...
+ 15	— 0·33	— 65	— 0·11	...
+ 10	— 0·31	— 70	— 0·09	— 0·21
+ 5	— 0·29	— 75	— 0 07	— 0·12
0	— 0·27	— 80	— 0·05	— 0·07
— 5	— 0·26	— 85	— 0·03	— 0·03
— 10	— 0·24	— 90	0·00	0·00
— 15	— 0·23	— 85	— 0·04	...
— 20	— 0·22	Lower Transits — 80	— 0·10	...
— 25	— 0·21	— 75	— 0·18	...
— 30	— 0·20	— 70	— 0·32	...

* For most practical purposes the corrections to the Catalogue places for Stars between Dec. — 70° and — 90° may be taken as the mean of the corrections for Upper and Lower Transit. Rigorously, of course, these corrections should be combined in proportion to the number of Upper and Lower Transits.

CATALOGUE OF STARS

FOR

1885·0

FROM OBSERVATIONS MADE AT THE

ROYAL OBSERVATORY, CAPE OF GOOD HOPE,

1879–1885.

CAPE OBSERVATIONS.

A 11907—600—4/93 Wt 183 D & S.

No.	Bradley or Lacaille.	Piazzi.	B.A.C.	Star's Name.	Mag.	Mean Date. 1800+	No. of Obs.	Mean R.A. 1885·0.	Annual Precession. 1885·0.	Secular Variation. 1885·0.	Annual Proper Motion. μ_α.	Corr. for μ_α to 1885·0.
								h m s	s	s	s	s
1	...	...	...	W.B. XXIII. 1203 ...	9·0*	82·72	3	0 0 8·990	+3·0725	+0·007	...	...
2	...	...	...	B.D. + 9° No. 5320 ..	9·2*	82·79	4	0 0 52·740	+3·0733	+0·007	...	...
3	...	...	...	W.B. XXIII. 1225 ...	9·0*	82·75	3	0 1 20·720	+3·0738	+0·007	...	...
4	...	...	...	B.D. + 10° No. 1	9·5*	82·76	3	0 1 35·510	+3·0741	+0·008	...	...
5*	3213	XXIII. 278	1	4 Ceti	6·4	80·45	20	0 1 50·620	+3·0718	0·000	+0·0006	+0·003
6	...	...	...	B.D. + 10° No. 2	9·5*	82·81	2	0 1 52·350	+3·0744	+0·007	...	...
7	3215	XXIII. 281	4	21 Andromedæ.....α	2·1	81·25	16	0 2 26·603	+3·0801	+0·018	+0·0095	+0·036
8	9745	...	...	Lacaille 9745	$7\frac{3}{4}$	82·58	12	0 2 34·377	+2·8132	—0·428	...	...
9	...	...	...	B.D. + 9° No. 3	9·5*	82·84	2	0 2 37·010	+3·0750	+0·007	...	...
10	...	...	...	B.D. + 10° No. 4	9·5*	82·80	3	0 2 42·260	+3·0755	+0·008	...	...
11	...	...	...	B.D. + 11° No. 3 ...	9·4*	82·81	3	0 3 0·640	+3·0760	+0·008	...	...
12	...	...	...	A.G.C. 47	$8\frac{3}{4}$	80·47	2	0 3 8·130	+3·0602	—0·017	...	...
13†	9742	...	11	Phœnicis .....ϵ	3·8	84·83	5	0 3 34·280	+3·0506	—0·029	+0·008*	+0·017
14	...	...	...	B.D. + 11° No. 5	8·9*	82·82	3	0 3 34·790	+3·0767	+0·008	...	...
15	...	...	...	B.D. + 11° No. 6	9·5*	82·86	3	0 3 56·100	+3·0769	+0·008	...	...
16	...	...	...	B.D. + 10° No. 7	8·4*	82·80	3	0 3 57·130	+3·0768	+0·008	...	...
17	...	...	...	B.D. + 12° No. 7	9·5*	82·84	2	0 4 44·210	+3·0784	+0·009	...	...
18	...	...	...	B.D. + 12° No. 8	8·5*	82·74	3	0 4 45·390	+3·0786	+0·009	...	...
19	9756	...	19	Octantis .....γ^3	5·6	83·31	23	0 4 48·023	+2·8487	—0·202	—0·014*	—0·024
20	...	...	...	B.D. + 11° No. 11 ...	9·5*	82·83	3	0 4 49·420	+3·0780	+0·008	...	...
21	...	...	...	B.D. + 12° No 10 ...	9·0*	82·70	1	0 5 9·090	+3·0794	+0·009	...	...
22	...	...	...	B.D. + 10° No. 10 ...	9·5*	82·87	1	0 5 23·710	+3·0781	+0·008	...	...
23	...	...	...	B.D. + 12° No. 11 ...	9·2*	82·89	2	0 5 24·780	+3·0793	+0·009	...	...
24	...	...	...	B.D. + 10° No. 9 ...	9·3*	82·81	3	0 5 26·640	+3·0786	+0·008	...	...
25†	9758	O. 6	23	Sculptoris ..... κ^2	5·5	81·05	23	0 5 43·983	+3·0543	—0·014	...	...
26	...	...	...	B.D. + 11° No. 14 ...	9·5*	82·76	3	0 5 45·460	+3·0793	+0·009	...	...
27	...	...	...	B.D. + 11° No. 16 ...	9·3*	82·73	4	0 7 3·850	+3·0811	+0·009	...	...
28	1	O. 9	26	88 Pegasi .....γ	3·0	80·84	18	0 7 18·844	+3·0834	+0·010	—0·0007	—0·003
29	...	...	...	B.D. — 17° No. 17 ...	8·0*	84·80	3	0 7 22·260	+3·0586	—0·007	...	...
30	...	...	...	B.D. + 12° No. 13 ...	8·4*	82·72	3	0 8 16·150	+3·0835	+0·009	...	...
31*	4	O. 15	33	7 Ceti	4·6	80·57	19	0 8 47·896	+3·0542	—0·008	—0·0033	—0·015
32	...	...	...	B.D. + 13° No. 25 ...	9·3*	82·76	3	0 9 5·530	+3·0852	+0·010	...	...
33	...	...	...	Lalande 198.....	8·3*	82·72	3	0 9 36·860	+3·0851	+0·009	...	...
34	...	...	...	B.D. + 11° No. 23 ...	9·5*	82·84	2	0 9 38·220	+3·0844	+0·009	...	...
35	...	...	...	W.B. O. 146	8·0*	82·83	6	0 10 44·440	+3·0849	+0·008	...	...

25. B.A.C. gives no letter.

No.	Mean Date. 1800+	No. of Obs.	Mean Dec. 1885·0.	Annual Precession. 1885·0.	Secular Variation. 1885·0.	Annual Proper Motion. μ_δ.	Corr. for μ_δ to 1885·0.	Fallows and Henderson.	Johnson.	Cape Catalogues. 1840.	1850.	1860.	1880.	A.G.C. 1875.	Melbourne, 1870 and 1880.
			° ′ ″	″	″	″	″								
1	82·72	3	+ 9 13 20·14	+20·054	— 0·01	...	...	...	...	...	...	...	...	...	*1211*
2	82·79	4	+ 9 25 39·43	+20·054	— 0·01	...	...	...	...	...	...	...	...	...	...
3	82·75	3	+ 10 4 28·03	+20·053	— 0·01	...	...	...	...	...	...	...	...	...	...
4	82·76	3	+ 10 38 0·34	+20·053	— 0·01	...	...	...	...	...	...	...	...	...	...
5	81·52	12	— 3 11 20·15	+20·053	— 0·01	+ 0·026	+0·09	...	...	...	1	...	...	22	...
6	82·77	3	+ 10 31 0·03	+20·053	— 0·01	...	...	...	...	...	...	...	...	...	...
7	82·50	16	+ 28 27 19·93	+20·053	— 0·01	— 0·156	—0·39	...	...	1	4	1	19	...	3*
8	82·59	13	— 86 40 45·18	+20·052	— 0·01	...	...	...	...	...	...	...	20	38	...
9	82·86	3	+ 9 39 26·86	+20·052	— 0·01	...	...	...	...	...	...	...	...	...	...
10	82·80	3	+ 11 6 29·67	+20·052	— 0·01	...	...	...	...	...	...	...	...	...	...
11	82·81	3	+ 11 21 33·44	+20·052	— 0·02	...	...	...	...	...	...	...	...	...	...
12	80·47	2	— 33 40 36·90	+20·052	— 0·02	...	...	...	...	...	...	...	...	47	...
13	84·83	5	— 46 22 55·18	+20·051	— 0·02	— 0·19*	—0·03	2	1	4	8	2	27	57	4
14	82·82	3	+ 11 44 26·68	+20·051	— 0·02	...	...	...	...	...	...	...	...	...	...
15	82·86	3	+ 11 11 25·65	+20·051	— 0·02	...	...	...	...	...	...	...	...	...	...
16	82·80	3	+ 10 46 37·28	+20·051	— 0·02	...	...	...	...	...	...	...	...	...	...
17	82·84	2	+ 12 17 24·03	+20·049	— 0·02	...	...	...	...	...	...	...	...	...	...
18	82·74	3	+ 12 34 58·05	+20·049	— 0·02	...	...	...	...	...	...	...	...	...	*6*
19	83·62	26	— 82 51 48·51	+20·049	— 0·02	— 0·05*	—0·07	*8*	2	5	12	3	37	78	7*
20	82·83	3	+ 11 20 5·26	+20·049	— 0·02	...	...	...	...	...	...	...	...	...	...
21	82·70	2	+ 13 6 44·07	+20·048	— 0·02	...	...	...	...	...	...	...	...	...	...
22	82·78	2	+ 10 17 22·50	+20·048	— 0·02	...	...	...	...	...	...	...	...	...	...
23	82·89	2	+ 12 25 2·93	+20·048	— 0·02	...	...	...	...	...	...	...	...	...	...
24	82·81	3	+ 11 3 6·17	+20·048	— 0·02	...	...	...	...	...	...	...	...	...	...
25*	82·14	13	— 28 26 25·24	+20·047	— 0·02	...	...	...	...	...	15	...	43	91	...
26	82·76	3	+ 11 39 31·76	+20·047	— 0·02	...	...	...	...	...	...	...	...	...	...
27	82·73	4	+ 11 55 19·15	+20·044	— 0·02	...	...	...	...	...	...	...	...	...	...
28	82·50	18	+ 14 32 39·08	+20·044	— 0·02	— 0·013	—0·03	*144*	...	7	18	4	56	...	9*
29	84·80	3	— 17 49 29·84	+20·044	— 0·02	...	...	...	...	...	...	...	...	...	...
30	82·72	3	+ 12 54 46·46	+20·041	— 0·02	...	...	...	...	...	...	...	...	...	...
31	81·86	12	— 19 34 11·99	+20·039	— 0·03	— 0·062	—0·19	...	...	...	22	...	70	142	*11*
32	82·76	3	+ 13 35 21·23	+20·038	— 0·03	...	...	...	...	...	...	...	...	...	...
33	82·72	3	+ 12 46 48·84	+20·036	— 0·03	...	...	...	...	...	...	...	...	...	*13*
34	82·82	3	+ 12 4 23·67	+20·036	— 0·03	...	...	...	...	...	...	...	...	...	...
35	82·83	6	+ 11 18 1·95	+20·031	— 0·03	...	...	...	...	...	...	...	...	...	*14*

No.	Bradley or Lacaille.	Piazzi.	B.A.C.	Star's Name.	Mag.	Mean Date. 1800+	No. of Obs.	Mean R.A. 1885·0.	Annual Precession. 1885·0.	Secular Variation. 1885·0.	Annual Proper Motion. μ_α.	Corr. for μ_α to 1885·0.
								h m s	s	s	s	s
36	8	O. 27	48	37 Piscium	7·5*	82·79	6	0 10 49·770	+3·0873	+0·010	+0·0026	+0·006
37	...	...	...	W.B. O. 150	9·3*	...	...	0 10 (51)	+3·0874	+0·010	...	...
38	...	...	...	Lalande 242.....	7·5*	82·86	6	0 11 6·640	+3·0835	+0·008	...	...
39	...	...	...	B.D. + 12° No. 15 ...	9·3*	82·79	3	0 11 16·050	+3·0870	+0·009	...	...
40	...	...	...	B.D. + 12° No. 16 ...	8·9*	82·90	2	0 11 42·100	+3·0874	+0·009	...	...
41	...	...	...	W.B. O. 167	9·3*	82·90	1	0 11 42·250	+3·0896	+0·010	...	...
42	...	O. 31	...	Piazzi O. 31	6·6	81·87	5	0 11 42·510	+3·0480	—0·008	...	...
43	...	...	...	W.B. O. 168	8·0*	82·87	6	0 11 43·860	+3·0862	+0·008	...	...
44	260	...	71	Octantis .....o	7·3	82·67	15	0 12 45·008	—1·1903	—3·056	+0·012*	+0·028
45	...	...	...	B.D. + 13° No. 31 ...	9·5*	82·68	1	0 12 51·650	+3·0908	+0·010	...	...
46	...	...	...	A.G.C. 214	7½	83·86	11	0 12 52·380	+2·9178	—0·053	...	...
47	...	...	...	W.B. O. 194	8·2*	82·77	3	0 13 20·400	+3·0909	+0·010	...	...
48	...	...	...	B.D. + 13° No. 35 ...	9·0*	82·79	2	0 13 29·910	+3·0909	+0·010	...	...
49*	14	O. 42	62	8 Ceti .....ι	3·6	80·76	47	0 13 34·090	+3·0592	—0·002	—0·0032	—0·014
50†	40	...	64	Toucani .....ζ	4·1	84·23	14	0 14 4·023	+2·8920	—0·055	+0·273	+0·210
51	...	...	...	B.D. + 14° No. 30 ...	9·5*	82·78	1	0 14 5·610	+3·0935	+0·011	...	...
52	...	...	...	B.D. + 14° No. 31 ...	9·5*	82·90	1	0 14 28·600	+3·0939	+0·011	...	...
53	16	O. 45	66	41 Piscium .....d	5·6	83·09	5	0 14 40·892	+3·0837	+0·007	—0·0013	—0·002
54	...	...	...	Lalande 386.....	7·8*	84·85	2	0 15 3·460	+3·0395	—0·008	...	...
55	...	...	...	B.D. + 14° No. 34 ...	9·5*	82·77	3	0 15 6·300	+3·0952	+0·011	...	...
56	...	...	...	B.D. + 14° No. 35 ...	9·5*	82·83	4	0 15 14·980	+3·0962	+0·011	...	...
57	...	...	...	B.D. + 15° No. 50 ...	9·5*	82·82	2	0 15 23·550	+3·0968	+0·011	...	...
58	54	O. 50	72	Sculptoris .. ..ι	5·5	80·14	13	0 15 44·368	+3·0203	—0·014	...	...
59	...	...	...	A.G.C 271	8·0	83·88	9	0 16 8·650	+2·8513	—0·057	...	...
60	...	...	...	B.D. + 14° No. 37 ...	9·5*	82·81	3	0 16 11·790	+3·0970	+0·011	...	...
61	...	...	...	W.B. O. 254	9·3	82·84	4	0 16 29·240	+3·0977	+0·011	...	...
62	...	...	...	B.D. + 15° No. 52 ...	9·5*	82·87	3	0 16 36·340	+3·0988	+0·011	...	...
63*	20	O. 55	75	9 Ceti	6·6	80·99	21	0 16 58·060	+3·0498	—0·004	+0·0262	+0·105
64	...	...	...	A.G.C. 302	9·0	80·47	3	0 17 48·790	+3·0037	—0·016	...	...
65	...	...	...	B.D. + 15° No. 57 ...	9·5*	82·76	3	0 18 44·120	+3·1024	+0·011	...	...
66	25	O. 64	87	44 Piscium	5·8	83·73	13	0 19 30·468	+3·0750	+0·004	—0·0028	—0·004
67	...	...	...	W.B. O. 299	8·4*	82·77	4	0 19 35·130	+3·1028	+0·011	...	...
68†	74	...	88	Hydri .....β	2·7	82·97	30	0 19 40·058	+2·5373	—0·087	+0·7007	+1·423
69	...	...	...	B.D. + 14° No. 43 ...	9·5*	82·73	4	0 19 47·090	+3·1034	+0·011	...	...
70	89	O. 68	93	Phœnicis .....κ	3·9	84·84	2	0 20 32·710	+2·9555	—0·024	...	...

No.	Mean Date. 1800+	No. of Obs.	Mean Dec. 1885·0.	Annual Precession. 1885·0.	Secular Variation. 1885·0.	Annual Proper Motion. μ_δ.	Corr. for μ_δ to 1885·0.	Fallows and Henderson.	Johnson.	Cape Catalogues. 1840.	1850.	1860.	1880.	A.G.C. 1875.	Melbourne, 1870 and 1880.
			° ′ ″	″	″	″	″								
36	82·79	6	+ 13 16 39·48	+20·031	— 0·03	0·00	0·00	...	...	...	...	...	...	...	...
37	82·70	2	+ 13 22 8·21	+20·031	— 0·03	...	...	...	...	...	...	...	...	...	...
38	82·86	6	+ 9 45 0·25	+20·030	— 0·03	...	...	...	...	...	...	...	...	...	...
39	82·79	3	+ 12 29 40·66	+20·029	— 0·03	...	...	...	...	...	...	...	...	...	..
40	82·90	2	+ 12 21 40·64	+20·027	— 0·03	...	...	...	...	...	...	...	...	...	...
41	82·90	1	+ 14 9 53·83	+20·027	— 0·03	...	...	...	...	...	...	...	...	...	...
42	81·84	1	— 19 41 22·23	+20·027	— 0·03	...	...	...	...	...	...	...	...	194	...
43	82·87	6	+ 11 24 13·04	+20·027	— 0·03	...	...	...	...	...	...	...	...	...	*16*
44	82·25	14	— 89 0 8·20	+20·023	0·00	0·00*	0·00	2	5	17	39	9	100	222	18*
45	82·68	1	+ 13 49 48·80	+20·022	— 0·03	...	...	...	...	...	...	...	...	...	...
46	83·86	12	— 64 6 52·63	+20·022	— 0·03	...	...	...	...	...	...	...	...	214	...
47	82·77	3	+ 13 24 58·63	+20·019	— 0·03	...	...	...	...	...	...	...	...	...	...
48	82·79	2	+ 13 13 33·90	+20·019	— 0·03	...	...	...	...	...	...	...	...	...	...
49	82·15	26	— 9 27 41·31	+20·018	— 0·03	— 0·032	—0·09	3	3	...	35	...	101	223	*18*
50*	84·23	14	— 65 33 3·39	+20·016	— 0·03	+ 1·16	+0·89	...	4	14	36	7	107	233	19.
51	82·78	1	+ 14 26 12·18	+20·016	— 0·04	...	...	...	...	...	...	...	...	...	...
52	82·90	1	+ 14 17 17·83	+20·013	— 0·04	...	...	...	...	...	...	...	...	...	...
53	82·85	2	+ 7 33 5·78	+20·012	— 0·04	+ 0·019	+0·04	...	...	15	...	8	...	...	...
54	84·85	2	— 20 34 4·72	+20·011	— 0·04	...	...	...	...	...	...	...	...	...	...
55	82·77	3	+ 14 30 52·97	+20·010	— 0·04	...	...	...	...	...	...	...	...	...	...
56	82·83	4	+ 15 1 5·84	+20·009	— 0·04	...	...	...	...	...	...	...	...	...	...
57	82·77	3	+ 15 13 49·02	+20·008	— 0·04	...	...	...	...	...	...	...	...	...	...
58	82·53	11	— 29 37 2·44	+20·006	— 0·04	...	...	...	...	16	40	...	118	263	...
59	83·88	9	— 66 56 31·91	+20·004	— 0·04	...	...	...	...	...	...	...	121	271	...
60	82·81	3	+ 14 35 27·70	+20·003	— 0·04	...	...	...	...	...	...	...	...	...	...
61	82·84	4	+ 14 46 0·76	+20·002	— 0·04	...	...	...	...	...	...	...	...	...	*19*
62	82·87	3	+ 15 17 28·00	+20·001	— 0·04	...	...	...	...	...	...	...	...	...	...
63	82·00	14	— 12 50 57·89	+19·999	— 0·04	+ 0·063	+0·19	...	...	...	42	...	125	284	*20*
64	80·47	3	— 33 30 16·17	+19·993	— 0·04	...	...	...	...	...	...	...	...	302	...
65	82·76	3	+ 15 23 0·01	+19·987	— 0·04	...	...	...	...	...	...	...	...	...	...
66	84·06	11	+ 1 18 9·90	+19·982	— 0·05	— 0·011	—0·01	...	...	20	...	...	...	...	23
67	82·77	4	+ 14 55 30·40	+19·981	— 0·05	...	...	...	...	...	...	...	...	...	...
68*	83·42	31	— 77 54 7·42	+19·980	— 0·04	+ 0·307	+0·48	5*	6	21	47	11	146	336	24*
69	82·73	4	+ 15 2 42·60	+19·979	— 0·05	...	...	...	...	...	...	...	...	...	...
70	84·84	2	— 44 19 5·26	+19·973	— 0·05	...	...	...	7	22	48	...	153	351	26

50. Proper Motion from Gill & Elkin's "Parallax of Southern Stars."

68. Proper Motion from Newcomb's Catalogue of 1098 Standard Stars.

No.	Bradley or Lacaille.	Piazzi.	B.A.C.	Star's Name.	Mag.	Mean Date. 1800+	No. of Obs.	Mean R.A. 1885·0.	Annual Precession. 1885·0.	Secular Variation. 1885·0.	Annual Proper Motion. μ_α.	Corr. for μ_α to 1885·0.
								h m s	s	s	s	s
71†	87	O. 69	94	Phœnicis .....α	2·4	84·65	6	0 20 35·845	+2·9608	−0·023	+0·022*	+0·008
72	...	...	...	B.D. + 15° No. 60 ...	9·1*	82·79	4	0 21 40·700	+3·1070	+0·012	...	...
73*	...	...	...	Lalande 628.....	6·4	80·72	16	0 22 35·031	+3·0220	−0·008	−0·0104	−0·045
74	...	...	...	B.D. + 15° No. 65 ...	9·5*	82·79	4	0 22 53·840	+3·1086	+0·011	...	...
75	...	O. 83	107	Piazzi O. 83.....	8·0	80·87	1	0 23 36·910	+3·0625	+0·001	...	...
76*	38	O. 89	112	12 Ceti	6·2	80·90	52	0 24 10·192	+3·0611	+0·001	−0·0003	−0·001
77*	106	O. 91	115	Piazzi O. 91.....	5·2	82·87	12	0 24 37·593	+3·0073	−0·010	−0·0035	−0·007
78	...	...	...	W.B. O. 384.....	9·0*	82·72	12	0 25 1·870	+3·1130	+0·012	...	...
79	119	...	127	Toucani .....β^1	4·3	84·78	6	0 26 16·100	+2·7645	−0·044	...	...
80	120	...	128	Toucani .....β^2	4·7	84·85	4	0 26 16·728	+2·7642	−0·044	...	...
81	50	O. 117	145	13 Ceti	5·3	81·83	6	0 29 19·590	+3·0598	+0·001	+0·0265	+0·084
82	53	O. 125	155	29 Andromedæ .....π	4·4	84·00	3	0 30 44·360	+3·1889	+0·024	−0·0004	0·000
83*	55	O. 133	163	15 Ceti	6·9	80·49	19	0 32 11·771	+3·0687	+0·003	−0·0056	−0·025
84	56	O. 134	164	30 Andromedæ .....ε	4·6	84·82	3	0 32 28·780	+3·1758	+0·021	−0·0184	−0·003
85	57	O. 136	166	31 Andromedæ .....δ	3·4	84·00	4	0 33 10·750	+3·1848	+0·022	+0·0100	+0·010
86	...	...	...	A.G.C. 611	9·0	80·47	2	0 34 47·180	+2·9402	−0·014	...	...
87	...	O. 146	174	Piazzi O. 146	6·3	82·52	6	0 34 51·053	+3·0547	+0·001	...	...
88†	177	...	183	Phœnicis .....μ	4·7	84·77	6	0 35 53·290	+2·8510	−0·023	0·000*	0·000
89	...	...	...	.....	10½†	84·83	2	0 37 9·550	+2·9529	−0·011	...	...
90*	70	O. 159	196	16 Ceti.....β	2·1	80·08	23	0 37 48·886	+2·9984	−0·006	+0·0147	+0·072
91	71	O. 163	200	17 Ceti	4·9	82·84	6	0 38 23·275	+3·0281	−0·002	−0·0027	−0·006
92	248	...	...	Lacaille 248.....	7·0	82·84	21	0 39 46·859	−0·5291	+0·622	...	...
93	78	O. 182	215	34 Andromedæ .....ζ	4·4	84·00	2	0 41 14·710	+3·1771	+0·018	−0·0091	−0·009
94	...	...	...	.....	9†	84·80	2	0 41 26·000	+2·9281	−0·012	...	...
95	...	...	...	A.G.C. 728	9·0	80·48	2	0 42 5·220	+2·9134	−0·013	...	...
96	85	O. 192	222	63 Piscium .....δ	4·6	82·47	34	0 42 42·959	+3·1026	+0·008	+0·0035	+0·009
97*	89	O. 201	233	19 Ceti	5·3	80·47	24	0 44 22·050	+3·0212	−0·001	−0·0178	−0·081
98†	235	...	236	Hydri .....λ	5·6	83·08	18	0 44 35·805	+2·0691	−0·035	...	...
99	93	O. 213	242	20 Ceti	5·0	82·16	7	0 47 7·856	+3·0640	+0·004	−0·0022	−0·006
100*	103	O. 235	260	22 Ceti	5·6	80·45	30	0 50 15·479	+3·0112	−0·001	−0·0045	−0·020
101	101	O. 232	259	37 Andromedæ .....μ	3·9	82·07	15	0 50 22·305	+3·2992	+0·031	+0·0141	+0·041
102	259	...	265	Lacaille 259.....	6·9	83·92	5	0 50 47·230	+2·6707	−0·025	...	...
103	265	...	...	Lacaille 265.....	7¾	84·82	2	0 52 32·110	+2·6709	−0·024	...	...
104	268	...	...	Lacaille 268.....	9·0	84·85	3	0 52 55·700	+2·6753	−0·023	...	...
105	106	O. 249	271	23 Ceti	5·8	81·82	14	0 52 58·356	+3·0073	−0·001	−0·0046	−0·015

77. Fundamental Star for Southern Zones. The name in *Ast. Nach.* 2890 is retained here.
91. ϕ^1 Ceti in B.A.C.
97. ϕ^2 Ceti in B.A.C.
100. ϕ^3 Ceti in B.A.C.
105. ϕ^4 Ceti in B.A.C.

No.	Mean Date. 1800+	No. of Obs.	Mean Dec. 1885·0.	Annual Precession. 1885·0.	Secular Variation. 1885·0.	Annual Proper Motion. μ_{δ}.	Corr. for μ_{δ} to 1885·0.	Fallows and Henderson.	Johnson.	Cape Catalogues. 1840.	1850.	1860.	1880.	A.G.C. 1875.	Melbourne. 1870 and 1880.
			° ′ ″	″	″	″	″								
71	84·59	7	— 42 55 49·88	+19·972	— 0·04	— 0·40*	—0·16	6*	8	23	49	13	155	355	27
72	82·79	4	+ 15 19 11·19	+19·964	— 0·05	...	...	...	...	...	...	...	...	...	...
73	82·84	12	— 20 58 4·25	+19·956	— 0·05	— 0·110	—0·24	...	...	...	...	...	...	383	*24*
74	82·79	4	+ 15 10 48·97	+19·954	— 0·05	...	...	...	...	...	...	...	...	...	...
75	80·87	1	— 4 6 19·59	+19·947	— 0·05	...	...	...	...	...	55	...	...	406	..
76	81·60	20	— 4 35 34·27	+19·942	— 0·06	— 0·009	—0·03	7	...	...	59	14	178	415	32*
77*	82·87	12	— 24 25 26·15	+19·938	— 0·06	+ 0·027	+0·06	...	...	26	60	...	179	419	*28*
78	82·72	12	+ 15 33 49·98	+19·934	— 0·06	...	...	..	...	...	...	...	...	...	*30*
79	84·78	6	— 63 35 30·80	+19·922	— 0·05	...	...	9	10	29	65	15	190	451	35
80	84·85	4	— 63 35 57·96	+19·922	— 0·05	...	...	...	11	30	66	...	191	452	36
81	81·84	2	— 4 13 33·77	+19·890	— 0·07	— 0·021	—0·07	...	...	38	76	18	213	505	...
82	84·00	3	+ 33 5 8·93	+19·873	— 0·07	0·000	0·00	...	...	...	...	...	...	...	...
83	81·05	12	— 1 8 9·74	+19·856	— 0·07	— 0·016	—0·06	...	...	...	83	...	231	558	41*
84	84·82	4	+ 28 41 13·53	+19·852	— 0·07	— 0·251	—0·05	...	...	...	...	...	233	...	...
85	84·00	4	+ 30 13 52·67	+19·844	— 0·08	— 0·080	—0·08	...	...	...	...	...	...	...	...
86	80·47	2	— 33 11 25·06	+19·823	— 0·07	...	...	...	...	...	...	...	...	611	...
87	82·86	4	— 4 58 59·13	+19·822	— 0·08	...	...	...	...	...	87	...	251	612	...
88	84·77	6	— 46 42 59·48	+19·808	— 0·07	— 0·02*	0·00	...	13	...	90	21	258	626	46
89*	84·83	2	— 28 57 16·19	+19·790	— 0·08	...	...	...	...	...	...	...	...	...	...
90	82·77	39	— 18 37 4·90	+19·782	— 0·08	+ 0·034	+0·08	13*	14	53	99	22	277	657	50*
91*	83·02	5	— 11 14 9·89	+19·773	— 0·08	— 0·113	—0·22	...	15	...	101	...	282	664	...
92	83·46	22	— 86 19 53·37	+19·752	0·00	...	...	...	...	...	...	...	300	700	...
93	84·00	2	+ 23 38 29·32	+19·730	— 0·09	— 0·072	—0·07	...	...	...	...	...	...	...	...
94*	84·80	2	— 30 59 9·47	+19·727	— 0·08	...	...	...	...	...	...	...	...	...	...
95	80·48	2	— 33 5 10·42	+19·717	— 0·09	...	...	...	...	...	...	...	...	728	...
96	82·45	31	+ 6 57 32·46	+19·706	— 0·09	— 0·037	—0·09	14	...	60	111	23	318	...	*43*
97*	81·07	14	— 11 15 48·90	+19·679	— 0·09	— 0·225	—0·88	...	...	...	114	...	328	757	*44*
98	83·40	19	— 75 32 58·29	+19·675	— 0·07	...	...	...	...	64	116	...	330	762	58
99	81·84	2	— 1 46 7·28	+19·631	— 0·10	— 0·009	—0·03	15	17	66	119	24	343	792	...
100*	80·87	12	— 11 53 22·15	+19·573	— 0·10	— 0·019	—0·08	...	...	...	125	...	364	851	*49*
101	82·18	17	+ 37 52 31·29	+19·571	— 0·11	+ 0·049	+0·14	...	...	...	...	...	...	...	*50*
102	83·92	5	— 53 48 50·74	+19·563	— 0·09	...	...	...	...	71	126	25	367	861	*51*
103	84·82	2	— 52 53 19·47	+19·529	— 0·10	...	...	...	...	...	...	...	374	893	...
104	84·85	3	— 52 22 45·49	+19·521	— 0·10	...	...	...	...	...	...	...	375	901	...
105*	81·66	12	— 12 0 3·27	+19·521	— 0·11	— 0·024	—0·08	...	...	...	129	...	376	900	...

89. Magnitude from Cape Observations.

94 Magnitude from Cape Observations.

No.	Bradley or Lacaille.	Piazzi.	B.A.C.	Star's Name.	Mag.	Mean Date. 1800+	No. of Obs.	Mean R.A. 1885·0.	Annual Precession. 1885·0.	Secular Variation. 1885·0.	Annual Proper Motion. μ_a.	Corr. for μ_a to 1885·0.
								h m s	s	s	s	s
106*	...	...	...	Lalande 1691	7·2	81·71	21	0 53 3·509	+2·9592	—0·005	+0·0026	+0·009
107†.	266	O. 250	272	Sculptoris .....*a*	4·1	81·63	20	0 53 3·831	+2·8954	—0·010	...	...
108	270	...	...	Lacaille 270.....	7¼	84·16	4	0 53 37·535	+2·6772	—0·022	...	...
109	...	...	...	.....	9½†	84·82	3	0 54 0·260	+2·8640	—0·012	...	...
110	275	...	...	Lacaille 275...	7¼	83·88	5	0 55 3·860	+2·6774	—0·022	...	...
111	284	...	...	Lacaille 284.....	8·0	83·86	5	0 56 58·250	+2·6765	—0·021	...	...
112	113	O. 264	288	71 Piscium .....*ε*	4·5	81·16	87	0 56 58·499	+3·1144	+0·009	—0·0070	—0·027
113*	116	O. 270	295	26 Ceti	6·0	81·36	20	0 57 53·888	+3·0768	+0·005	+0·0064	+0·023
114	128	O. 286	315	28 Ceti	5·4	81·90	1	1 0 18·990	+3·0082	0·000	—0·0005	—0·002
115	...	...	...	A.G.C. 1018	8¼	80·49	2	1 0 34·280	+2·8502	—0·010	...	...
116†	308	...	317	Phœnicis .....*β*	3·3	84·79	5	1 0 56·966	+2·6911	—0·018	...	...
117	135	O. 296	323	30 Ceti	5·9	81·88	6	1 1 59·160	+3·0068	0·000	+0·0090	+0·028
118*	141	O. 300	332	31 Ceti.....*η*	3·6	81·27	29	1 2 48·214	+3·0034	0·000	+0·0125	+0·047
119	140	O. 301	334	43 Andromedæ .....*β*	2·2	81·00	13	1 3 17·634	+3·3278	+0·029	+0·0144	+0·058
120	318	...	340	Phœnicis .....*ζ*	4¼	84·86	2	1 3 32·960	+2·5326	—0·022	...	...
121	...	...	...	....	10½†	84·82	3	1 4 33·140	+2·7845	—0·012	...	...
122	149	I. 5	349	83 Piscium ... .*τ*	4·7	82·31	27	1 5 19·677	+3·2849	+0·024	+0·0045	+0·012
123	152	I. 10	356	34 Ceti	6·1	81·89	6	1 5 52·580	+3·0535	+0·004	—0·0066	—0·021
124	...	...	...	A.G.C. 1141.....	9¼	80·50	2	1 8 3·250	+2·8262	—0·009	...	...
125*	167	I. 32	384	39 Ceti	5·6	80·32	26	1 10 46·015	+3·0504	+0·004	—0·0092	—0·043
126	...	...	...	A.G.C. 1199.....	8½	80·49	2	1 11 23·560	+2·8162	—0·009	...	...
127	356	...	392	Toucani .....*κ*	5½	84·84	5	1 11 51·890	+1·9701	—0·015	+0·080*	+0·013
128	171	I. 36	388	89 Piscium .....*f*	5·1	84·72	6	1 11 52·083	+3·0941	+0·007	—0·0049	—0·001
129	173	I. 41	395	90 Piscium .....*v*	4·7	82·57	7	1 13 8·809	+3·2830	+0·022	—0·0002	0·000
130	175	I. 47	400	42 Ceti	6·3	81·88	6	1 13 55·540	+3·0642	+0·005	—0·0010	—0·003
131	...	...	...	A.G.C. 1254	7¾	84·83	2	1 14 21·720	+2·7151	—0·012	...	...
132	...	I. 59	408	Piazzi I. 59	7·5*	81·91	6	1 16 46·280	+3·1043	+0·008	...	...
133	...	...	...	C.Z.I. 429	9½	84·80	1	1 17 5·410	+2·6878	—0·012	...	...
134*	184	I. 67	420	45 Ceti..... .....*θ*	3·8	80·96	84	1 18 16·535	+3·0033	+0·002	—0·0068	—0·027
135	192	I. 82	435	47 Ceti	5·8	81·89	6	1 21 11·060	+2·9598	0·000	—0·0003	—0·001
136	...	...	...	A.G.C. 1376	8·0	84·80	1	1 21 37·740	+2·6660	—0·012	...	...
137†	419	I. 94	447	Phœnicis .....*γ*	3·4	84·86	5	1 23 22·132	+2·6147	—0·012	—0·004*	—0·001
138*	200*	I. 96	449	48 Ceti	5·1	80·42	31	1 24 5·085	+2·8765	—0·004	+0·0017	+0·008
139	203	I. 98	453	99 Piscium .....*η*	3·7	84·00	3	1 25 19 860	+3·2004	+0·014	—0·0002	0·000
140†	440	...	461	Phœnicis... .....*δ*	4·0	84·86	2	1 26 27·730	+2·4923	—0·014	+0·009*	+0·001

138. Fundamental Star for Southern Zones.

No.	Mean Date. 1800+	No. of Obs.	Mean Dec. 1885·0.	Annual Precession. 1885·0.	Secular Variation. 1885·0.	Annual Proper Motion. μ_δ.	Corr. for μ_δ to 1885·0.	Fallows and Henderson.	Johnson.	Cape Catalogues. 1840.	Cape Catalogues. 1850.	Cape Catalogues. 1860.	Cape Catalogues. 1880.	A.G.C. 1875.	Melbourne, 1870 and 1880.
			° ′ ″	″	″	″	″								
106	83·06	11	− 20 15 12·90	+19·519	− 0·11	− 0·044	−0·09	...	...	...	...	...	...	...	*52*
107	83·15	12	− 29 58 44·98	+19·518	− 0·11	...	...	16	18	73	130	26	378	902	...
108	84·16	4	− 51 53 12·21	+19·507	− 0·10	...	...	...	...	...	...	...	381	911	...
109*	84·82	3	− 33 43 30·44	+19·499	− 0·11	...	...	...	...	..	...	...	...	...	...
110	83·88	5	− 51 8 43·55	+19·477	− 0·10	...	...	...	...	...	...	...	387	931	...
111	83·86	5	− 50 16 23·36	+19·437	− 0·10	...	...	...	...	...	...	...	401	954	...
112	81·82	45	+ 7 16 14·67	+19·437	− 0·12	+ 0·039	+0·12	...	...	76	137	27	400	...	67*
113	82·26	13	+ 0 45 0·63	+19·417	− 0·12	− 0·033	−0·09	...	...	...	...	...	...	...	68*
114	...	...	− 10 27 (20)	+19·363	− 0·12	+ 0·020	...	...	...	...	149	...	426	1009	...
115	80·49	2	− 32 28 10·15	+19·357	− 0·12	...	...	...	...	...	...	...	...	1018	*68*
116	84·79	5	− 47 20 6·32	+19·349	− 0·11	...	...	17	19	82	151	29	430	1024	72
117	81·89	2	− 10 24 3·16	+19·325	− 0·13	+ 0·011	+0·03	...	...	...	153	...	438	1044	...
118	82·62	18	− 10 47 31·29	+19·305	− 0·12	− 0·124	−0·30	...	20	...	158	...	444	1056	*66*
119	81·00	13	+ 35 0 39·06	+19·294	− 0·14	− 0·084	−0·34	...	...	...	...	...	447	...	*67*
120	84·86	2	− 55 51 39·33	+19·287	− 0·11	...	...	18	21	88	160	32	450	1069	78
121*	84·82	3	− 37 46 6·37	+19·263	− 0·12	...	...	...	...	...	...	...	...	...	...
122	82·38	22	+ 29 28 43·23	+19·244	− 0·14	− 0·012	−0·03	...	...	...	...	...	...	...	...
123	81·88	2	− 2 51 43·70	+19·231	− 0·14	− 0·014	−0·04	...	...	...	167	...	459	1104	...
124	80·50	2	− 32 11 1·62	+19·176	− 0·13	...	...	...	...	...	...	...	...	1141	...
125	80·92	13	− 3 6 21·13	+19·105	− 0·14	− 0·060	−0·24	...	...	...	180	...	...	1187	*71*
126	80·49	2	− 32 0 53·59	+19·088	− 0·13	...	...	...	...	...	...	..	...	1199	...
127	84·84	5	− 69 29 13·69	+19·076	− 0·10	+ 0·07*	+0·01	...	...	99	184	37	496	1210	86
128	84·72	6	+ 3 0 30·99	+19·076	− 0·15	− 0·019	−0·01	...	...	98	..	...	...	...	...
129	84·00	2	+ 26 39 32·34	+19·041	− 0·16	− 0·003	0·00	...	...	...	...	...	...	...	...
130	81·88	2	− 1 6 46·75	+19·019	− 0·15	+ 0·002	+0·01	...	...	...	189	...	507	1241	...
131	84·83	2	− 39 58 8·34	+19·007	− 0·13	...	...	...	...	...	...	...	...	1254	...
132	81·89	2	+ 4 8 12·40	+18·939	− 0·16	...	...	...	...	...	...	...	...	...	...
133	84·81	2	− 41 4 33·90	+18·930	− 0·14	...	...	...	...	...	...	...	...	...	...
134	82·12	26	− 8 46 36·81	+18·896	− 0·16	− 0·196	−0·56	20*	22	105	199	39	543	1326	92*
135	81·89	2	− 13 39 14·75	+18·808	− 0·16	+ 0·011	+0·03	...	...	...	208	...	564	1370	...
136	84·81	2	− 41 4 51·29	+18·794	− 0·14	...	...	...	..	...	...	...	...	1376	...
137	84·86	5	− 43 54 28·01	+18·742	− 0·14	− 0·24*	−0·03	22*	25	112	211	44	580	1411	97
138*	80·86	12	− 22 13 27·91	+18·719	− 0·16	− 0·01	−0·04	...	...	114	213	...	584	1421	*80*
139	84·00	3	+ 14 45 9·73	+18·680	− 0·18	− 0·003	0·00	...	...	116	...	46	594	...	99*
140	84·86	2	− 49 40 14·74	+18·644	− 0·14	+ 0·14*	+0·02	24	26	118	218	47	600	1462	100

109. Magnitude from Cape Observations.

121. Magnitude from Cape Observations.

No.	Bradley or Lacaille.	Piazzi.	B.A.C.	Star's Name.	Mag.	Mean Date. 1800+	No. of Obs.	Mean R.A. 1885·0.	Annual Precession. 1885·0.	Secular Variation. 1885·0.	Annual Proper Motion. μ_α.	Corr. for μ_α to 1885·0.
								h m s	s	s	s	s
141	...	...	...	A.G.C. 1477	7½	81·89	6	1 27 3·420	+2·8962	−0·002	...	...
142*	213	I. 125	485	50 Ceti	5·5	80·79	35	1 30 22·437	+2·9252	−0·001	−0·0006	−0·003
143	212	I. 124	487	Persei .....υ	3·7	81·31	11	1 30 56·182	+3·6471	+0·048	+0·0045	+0·017
144	214	I. 126	488	102 Piscium .....π	5·6	84·81	7	1 31 0·173	+3·1781	+0·012	−0·0064	−0·001
145†	505	...	512	Lacaille 505.....	6·3	83·14	21	1 32 54·159	+0·3376	+0·119	−0·007*	−0·013
146	484	...	507	Eridani .....a	1·0	84·00	16	1 33 25·808	+2·2300	−0·013	+0·0028	+0·003
147	...	...	...	.....	9†	84·85	2	1 35 13·240	+2·5139	−0·011	...	...
148*	228	I. 150	518	106 Piscium .....ν	4·7	80·58	43	1 35 26·803	+3·1188	+0·009	−0·0034	−0·015
149	233	I. 163	536	52 Ceti .....τ	3·6	82·67	17	1 38 43·760	+2·9066	0·000	−0·1223	−0·285
150	232	I. 164	537	110 Piscium .....o	4·4	80·75	49	1 39 19·248	+3·1571	+0·011	+0·0029	+0·012
151*	...	I. 167	539	Piazzi I. 167	5·7	81·82	17	1 40 12·925	+3·0098	+0·004	−0·0004	−0·001
152*	511	I. 168	541	Sculptoris .....ϵ	5·3	81·22	12	1 40 15·479	+2·8007	−0·004	+0·0094	+0·036
153	...	...	...	A.G.C. 1731	9·0	84·84	1	1 41 33·060	+2·4464	−0·010	...	...
154†	523	...	550	Eridani ....q^2	5·4	84·77	3	1 41 43·130	+2·2793	−0·010	...	...
155	...	...	...	A.G.C. 1755	8¾	84·86	1	1 42 44·280	+2·4106	−0·010	...	...
156	634	...	584	Lacaille 634.....	6·1	83·11	28	1 44 8·576	−4·1422	+1·230	...	...
157	243	I. 185	561	54 Ceti	5·8	82·61	9	1 44 45·892	+3·1815	+0·012	−0·0062	−0·015
158*	247	I. 192	565	55 Ceti ....ζ	3·9	81·27	24	1 45 47·018	+2·9577	+0·002	+0·0003	+0·001
159	249	I. 196	573	5 Arietis (N. Star) ...γ	4·4†	84·87	1	1 47 13·170	+3·2768	+0·017	+0·0035	0·000
160*	251	I. 201	574	111 Piscium .....ξ	4·7	80·25	45	1 47 36·131	+3·1001	+0·008	+0·0004	+0·002
161	...	...	...	C.Z.I. 1233	9½	84·84	1	1 47 48·730	+2·3706	−0·009	...	...
162	252	I. 202	577	6 Arietis .....β	2·8	79·83	12	1 48 17·221	+3·2968	+0·018	+0·0050	+0·026
163	606	...	591	Hydri.....τ^2	6·1	83·20	20	1 48 52·731	−0·6806	+0·244	...	...
164†	559	...	582	Phœnicis .....ψ	4·8	84·87	1	1 49 1·780	+2·4188	−0·009	−0·015*	−0·002
165	267*	I. 218	594	56 Ceti	5·2	83·19	12	1 51 17·062	+2·8064	−0·002	+0·0029	+0·005
166†	575	...	596	Eridani .....χ	3·9	84·83	6	1 51 28·860	+2·2673	−0·009	+0·067*	+0·011
167	271	I. 226	615	112 Piscium	5·8	82·93	9	1 54 10·233	+3·1008	+0·008	+0·0141	+0·029
168*	273	I. 232	618	59 Ceti .....υ	3·8	80·41	23	1 54 35·130	+2·8182	−0·001	+0·0065	+0·030
169	...	...	...	A.G.C. 1971	8¾	84·84	2	1 54 50·290	+2·2878	−0·008	...	...
170†	605	...	623	Hydri .....a	2·9	84·90	2	1 55 8·490	+1·8551	−0·002	+0·034*	+0·003
171	637	...	638	Hydri .....σ	6·3	83·45	17	1 56 3·600	−0·2363	+0·163	...	...
172	277	I. 238	625	113 Piscium .....a	3·7†	84·75	5	1 56 5·728	+3·0974	+0·008	+0·0016	0·000
173	...	...	...	Lalande 3811	5·9	79·97	19	1 57 52·891	+3·0188	+0·005	...	...
174*	281	I. 247	639	61 Ceti	6·0	82·33	18	1 57 54·953	+3·0622	+0·007	+0·0038	+0·010
175	287	I. 253	648	13 Arietis .....a	2·0	80·72	18	2 0 41·387	+3·3565	+0·020	+0·0127	+0·054

143. 51 Andromedæ in B.A.C.
163. B.A.C. gives no letter.
168. Fundamental Star for Southern Zones.
152. Fundamental Star for Southern Zones.
164. B.A.C. gives no letter.
171. B.A.C. gives no letter.

No.	Mean Date. 1800+	No. of Obs.	Mean Dec. 1885·0.	Annual Precession. 1885·0.	Secular Variation. 1885·0.	Annual Proper Motion. μ_δ.	Corr. for μ_δ to 1885·0.	Fallows and Henderson.	Johnson.	Cape Catalogues. 1840.	1850.	1860.	1880.	A.G.C. 1875.	Melbourne, 1870 and 1880.
			° ′ ″	″	″	″	″								
141	81·89	2	— 19 34 4·77	+18·624	— 0·16	...	...	...	...	...	...	...	...	1477	...
142	80·94	13	— 15 59 20·01	+18·514	— 0·17	+ 0·016	+0·06	...	...	...	228	...	630	1540	*87*
143*	81·31	11	+ 48 2 45·52	+18·496	— 0·21	— 0·111	—0·41	...	...	124	...	...	...	...	*88*
144	84·81	7	+ 11 33 10·32	+18·494	— 0·19	+ 0·054	+0·01	...	...	...	...	50	...	...	...
145	83·44	21	— 79 5 18·66	+18·429	— 0·03	— 0·13*	—0·20	...	...	133	240	...	645	1586	102*
146*	84·00	18	— 57 49 15·47	+18·410	— 0·14	— 0·048	—0·05	25*	27	132	239	51	650	1594	103*
147*	84·85	2	— 45 59 9·73	+18·348	— 0·16	...	...	...	...	...	...	...	...	...	...
148	81·47	19	+ 4 54 18·88	+18·339	— 0·19	+ 0·005	+0·02	27	...	134	242	52	665	...	104*
149	82·67	17	— 16 32 38·18	+18·221	— 0·18	+ 0·857	+2·00	28	28	142	252	...	685	1688	*96*
150	81·76	21	+ 8 34 43·05	+18·200	— 0·20	+ 0·058	+0·19	29	...	143	253	53	688	...	*97*
151	82·64	12	— 6 18 32·50	+18·167	— 0·19	— 0·024	—0·06	...	...	...	254	54	695	1709	*98*
152*	82·99	13	— 25 37 39·13	+18·165	— 0·18	— 0·033	—0·07	30	29	144	255	55	696	1713	*99*
153	84·84	1	— 47 31 17·26	+18·117	— 0·16	...	...	...	...	...	...	...	...	1731	...
154	84·77	3	— 54 5 58·56	+18·111	— 0·15	...	...	...	...	146	258	56	703	1737	...
155	84·86	1	— 48 47 56·23	+18·072	— 0·16	...	...	...	...	...	..	...	...	1755	...
156	83·36	23	— 85 20 59·92	+18·019	+ 0·26	...	...	...	...	...	270	61	725	1800	113*
157	81·92	2	+ 10 28 24·42	+17·995	— 0·21	— 0·031	—0·10	...	...	...	...	...	...	...	...
158	82·52	18	— 10 54 12·64	+17·955	— 0·20	— 0·028	—0·07	31*	31	...	266	59	734	1805	*106*
159*	84·87	1	+ 18 43 53·71	+17·899	— 0·22	— 0·102	—0·01	...	...	157	...	60	...	...	...
160	81·00	16	+ 2 37 9·87	+17·883	— 0·21	+ 0·020	+0·08	...	...	158	...	...	...	...	114*
161	84·84	1	— 49 11 17·67	+17·875	— 0·16	...	...	...	...	...	...	...	...	...	...
162	81·25	12	+ 20 14 43·98	+17·857	— 0·23	— 0·102	—0·38	...	...	159	...	62	...	...	115*
163*	83·20	20	— 80 44 40·71	+17·832	+ 0·04	...	...	...	...	166	275	...	755	1869	...
164*	84·87	1	— 46 51 58·06	+17·827	— 0·17	— 0·15*	—0·02	...	...	162	272	63	754	1864	*111*
165	81·89	2	— 23 5 19·04	+17·735	— 0·20	— 0·030	—0·09	...	...	165	276	66	763	1895	...
166	84·83	6	— 52 10 54·44	+17·728	— 0·16	+ 0·25*	+0·04	32	33	167	277	67	765	1905	117
167	81·93	2	+ 2 32 48·95	+17·615	— 0·22	— 0·250	—0·77	...	...	...	...	...	...	...	...
168*	81·51	15	— 21 38 7·46	+17·599	— 0·21	— 0·018	—0·06	...	35	171	286	...	790	1965	*114*
169	84·84	2	— 50 42 3·93	+17·589	— 0·17	...	...	...	...	...	...	...	...	1971	...
170	84·90	2	— 62 7 45·38	+17·576	— 0·14	+ 0·01*	0·00	33*	36	173	290	69	795	1981	120*
171*	83·40	17	— 78 54 37·88	+17·536	+ 0·01	...	...	...	...	181	298	...	804	2004	*116*
172*	84·75	5	+ 2 12 28·26	+17·535	— 0·23	— 0·009	0·00	...	...	...	291	...	800	...	...
173	82·88	12	— 4 39 17·73	+17·459	— 0·22	...	...	...	...	...	...	...	...	2036	...
174	81·12	11	— 0 53 31·80	+17·458	— 0·22	— 0·058	—0·23	...	...	...	297	...	816	2037	*118*
175	82·59	17	+ 22 55 6·02	+17·337	— 0·25	— 0·134	—0·32	...	...	184	301	73	830	...	125*

146. Proper Motion from Newcomb's Catalogue of 1098 Standard Stars.
147. Magnitude from Cape Observations.
159. Magnitude from Struve's *Mensuræ Micrometricæ*
172. Magnitude from *Uranometria Nova Oxoniensis.*

No.	Bradley or Lacaille.	Piazzi.	B.A.C.	Star's Name.	Mag.	Mean Date. 1800+	No. of Obs.	Mean R.A. 1885·0.	Annual Precession. 1885·0.	Secular Variation. 1885·0.	Annual Proper Motion. μ_α.	Corr. for μ_α to 1885·0.
								h m s	s	s	s	s
176	290	I. 260	656	4 Trianguli .....β	3·1	81·38	16	2 2 42·061	+ 3·5401	+ 0·030	+0·0118	+0·043
177*	...	...	...	Lalande 3979	6·2	81·24	30	2 3 18·478	+ 2·8455	0·000	—0·0036	—0·014
178*	295	I. 265	660	62 Ceti	7·1	81·90	12	2 3 20·133	+ 3·0380	+ 0·006	—0·0062	—0·019
179	306	II. 16	684	65 Ceti.....ξ^1	4·5	83·82	19	2 6 54·293	+ 3·1751	+ 0·012	—0·0032	—0·004
180†	666	II. 28	688	Fornacis.....μ	5·4	81·54	15	2 7 50·498	+ 2·6426	— 0·003	—0·0011	—0·004
181	...	...	...	A.G.C. 2254	9·0	84·74	2	2 8 35·470	+ 2·1276	— 0·005	...	...
182	709	...	711	Lacaille 709.....	6·7	81·73	10	2 10 22·385	— 0·0880	+ 0·126	...	...
183*	321	II. 47	704	67 Ceti	5·5	80·32	32	2 11 14·809	+ 2·9841	+ 0·005	+0·0036	+0·017
184	320	II. 49	707	22 Arietis .....θ	5·6	84·87	2	2 11 43·730	+ 3·3279	+ 0·018	—0·0023	0·000
185†	693	...	717	Eridani .....φ	3·5	84·86	2	2 12 23·970	+ 2·1363	— 0·004	...	...
186*	329	II. 56	720	68 Ceti.....o	Var.	79·96	45	2 13 32·245	+ 3·0274	+ 0·006	—0·0022	—0·011
187	...	...	...	C.Z. II. 394	9·0	84·86	1	2 15 18·430	+ 2·0583	— 0·003	...	...
188*	712	II. 73	737	Fornacis..... ...κ	5·4	81·58	29	2 17 16·739	+ 2·7314	— 0·001	+0·0154	+0·053
189†	747	...	756	Hydri... .....δ	4·1	84·76	2	2 19 42·240	+ 1·0592	+ 0·029	...	...
190*	343	II. 87	754	72 Ceti.....ρ	4·9	80·50	27	2 20 23·665	+ 2·8976	+ 0·003	—0·0029	—0·013
191	...	...	...	A.G.C. 2539	9½	84·74	2	2 21 30·870	+ 1·9377	— 0·001	...	...
192	347	II. 94	760	73 Ceti ....ξ^2	4·4	83·45	11	2 22 2·680	+ 3·1808	+ 0·012	+0·0011	+0·002
193†	753	...	763	Eridani ....κ	4·2	84·80	3	2 22 46·067	+ 2·1994	— 0·003	...	...
194	...	...	...	C.Z. II. 651	9½	84·86	1	2 24 40·290	+ 1·9072	0·000	...	...
195*	356	II. 113	781	76 Ceti.....σ	4·7	81·92	25	2 26 38·196	+ 2·8473	+ 0·003	—0·0062	—0·019
196	783	II. 122	790	Fornacis.....ω	4·8	80·27	11	2 28 48·504	+ 2·6291	— 0·001	...	...
197	...	. .	...	.....	8½†	84·86	2	2 29 45·020	+ 1·8293	+ 0·002	...	...
198	362	II. 125	794	78 Ceti.....ν	4·9	83·47	12	2 29 50·391	+ 3·1448	+ 0·010	—0·0051	—0·008
199*	368	II. 138	807	81 Ceti	5·7	80·06	12	2 31 54·210	+ 3·0164	+ 0·007	+0·0022	+0·011
200	367	II. 136	808	32 Arietis.....ν	5·4	83·60	5	2 32 17·140	+ 3·3965	+ 0·019	—0·0019	—0·003
201*	372	II. 144	811	82 Ceti .....δ	4·1	80·59	39	2 33 35·281	+ 3·0700	+ 0·008	+0·0004	+0·002
202	375	II. 149	815	83 Ceti .....ε	5·0	84·87	1	2 33 59·970	+ 2·8900	+ 0·004	+0·0081	+0·001
203†	831	II. 159	832	Eridani .....ι	4·2	84·86	1	2 36 7·700	+ 2·3571	— 0·002	...	...
204	383	II. 161	837	86 Ceti (2nd Star).....γ	3·0†	80·21	29	2 37 20·583	+ 3·1131	+ 0·009	—0·0114	—0·055
205	1029	...	...	Lacaille 1029.....	7½	82·86	27	2 37 54·514	— 9·8134	+ 2·596	...	...
206*	388	II. 170	847	89 Ceti.....π	4·3	81·14	15	2 38 38·923	+ 2·8542	+ 0·003	—0·0028	—0·011
207	387	II. 167	845	87 Ceti.....μ	4·4	82·22	9	2 38 43·503	+ 3·2172	+ 0·013	+0·0164	+0·046
208	...	...	...	.....	9½†	84·74	2	2 41 22·720	+ 1·7054	+ 0·005	...	...
209	...	...	...	Lalande 5220	6·3*	82·41	7	2 42 25·366	+ 2·8724	+ 0·004	...	...
210	1884	...	...	Lacaille 1884	7¾	82·88	9	2 43 7·006	—42·1226	+33·295	...	...

188. Fundamental Star for Southern Zones.

196. B.A.C. gives no letter.

207. B.A.C. assigns this Star to Aries.

No.	Mean Date. 1800+	No. of Obs.	Mean Dec. 1885·0.	Annual Precession. 1885·0.	Secular Variation. 1885·0.	Annual Proper Motion. μ_δ.	Corr. for μ_δ to 1885·0.	Fallows and Henderson.	Johnson.	Cape Catalogues. 1840.	1850.	1860.	1880.	A.G.C. 1875.	Melbourne, 1870 and 1880.
			° ′ ″	″	″	″	″								
176	82·13	16	+ 34 26 33·91	+17·248	— 0·27	— 0·033	—0·09	...	...	...	...	...	...	...	...
177	81·58	11	— 18 19 27·56	+17·220	— 0·22	— 0·069	—0·24	...	...	...	...	...	...	2144	*121*
178	81·90	12	— 2 52 34·13	+17·219	— 0·24	— 0·033	—0·10	...	...	...	306	...	844	2143	*122*
179	84·28	10	+ 8 18 24·61	+17·057	— 0·25	— 0·001	0·00	34	...	191	314	77	872	...	...
180	81·54	15	— 31 15 49·42	+17·014	— 0·21	— 0·010	—0·03	...	...	192	317	78	880	2237	*128*
181	84·74	2	— 53 1 30·23	+16·979	— 0·17	...	...	...	...	...	...	...	...	2254	...
182	82·37	10	— 77 9 48·86	+16·896	0·00	...	...	...	...	197	322	...	899	2296	128
183	81·19	16	— 6 57 8·91	+16·854	— 0·24	— 0·109	—0·42	...	...	...	320	79	904	2310	129*
184	84·87	2	+ 19 22 6·98	+16·831	— 0·27	+ 0·010	0·00	...	...	195	...	80	...	...	...
185	84·86	2	— 52 2 41·66	+16·800	— 0·18	...	...	35	38	198	325	81	913	2339	131
186*	81·33	18	— 3 30 0·29	+16·745	— 0·25	— 0·230	—0·84	36	39	...	326	...	917	2354	*132*
187	84·86	1	— 53 43 32·27	+16·659	— 0·17	...	...	...	...	...	...	...	...	...	...
188*	81·04	12	— 24 20 21·34	+16·562	— 0·23	— 0·058	—0·23	...	...	206	336	...	942	2433	*136*
189	84·76	2	— 69 10 58·88	+16·442	— 0·10	...	..	39	41	210	346	84	960	2498	134
190	80·92	12	— 12 48 34·60	+16·407	— 0·25	+ 0·003	+0·01	...	40	...	345	...	968	2509	*140*
191	84·74	2	— 55 42 0·20	+16·350	— 0·17	...	...	...	...	...	...	...	...	2539	...
192	84·00	9	+ 7 56 38·60	+16·323	— 0·28	— 0·001	0·00	...	...	211	347	85	973	...	135*
193	84·80	3	— 48 13 12·97	+16·287	— 0·19	...	...	40	42	213	349	86	978	2556	137
194	84·86	1	— 55 53 47·53	+16·189	— 0·17	...	...	...	...	...	...	...	...	...	...
195	80·90	12	— 15 44 59·07	+16·087	— 0·26	— 0·108	—0·44	42	43	221	359	88	1009	2642	*145*
196*	82·35	12	— 28 44 17·27	+15·972	— 0·24	...	...	...	...	223	363	...	1024	2693	...
197*	84·86	2	— 56 49 24·62	+15·923	— 0·17	...	...	...	...	...	...	...	...	...	...
198	81·95	2	+ 5 5 27·22	+15·919	— 0·29	— 0·028	—0·09	...	...	225	366	...	1034	...	...
199	83·23	12	— 3 53 40·22	+15·808	— 0·28	— 0·028	—0·05	...	...	...	371	...	1047	2765	*149*
200	84·00	4	+ 21 27 47·63	+15·787	— 0·31	— 0·011	—0·01	...	...	229	...	...	...	...	..
201	81·36	14	— 0 10 5·30	+15·717	— 0·28	— 0·007	—0·03	44	44	...	373	...	1057	2799	*150*
202	84·87	1	— 12 21 39·32	+15·694	— 0·27	— 0·245	—0·03	...	45	...	375	...	1064	2810	...
203	84·86	1	— 40 20 53·46	+15·577	— 0·22	...	...	...	47	236	381	94	1086	2851	143
204*	81·07	16	+ 2 45 2·45	+15·511	— 0·29	— 0·156	—0·61	*126*	...	237	384	95	1096	...	144*
205	83·39	22	— 86 13 34·86	+15·480	+ 0·90	...	...	...	...	...	...	...	1117	2928	*159*
206	82·30	15	— 14 20 46·75	+15·438	— 0·27	— 0·009	—0·02	47	48	245	391	...	1109	2894	*158*
207*	83·00	6	+ 9 37 41·10	+15·434	— 0·31	— 0·020	—0·04	...	...	243	389	96	1111	...	...
208*	84·74	2	— 57 39 34·50	+15·284	— 0·17	...	...	...	...	...	...	...	...	...	...
209	81·97	2	— 12 56 24·95	+15·225	— 0·28	...	...	...	...	...	...	...	...	...	...
210	82·91	8	— 88 53 34·87	+15·184	+ 4·00	...	...	...	...	...	...	...	1171	3149	153*

186. *Mira* Ceti.
204. Magnitude from Struve's *Mensuræ Micrometricæ*.

197. Magnitude from Cape Observations.
208. Magnitude from Cape Observations.

No.	Bradley or Lacaille.	Piazzi.	B.A.C.	Star's Name.	Mag.	Mean Date. 1800+	No. of Obs.	Mean R.A. 1885·0.	Annual Precession. 1885·0.	Secular Variation. 1885·0.	Annual Proper Motion. μ_α.	Corr. for μ_α to 1885·0.
								h m s	s	s	s	s
211	395	II. 186	872	41 Arietis	3·8	82·00	1	2 43 12·870	+ 3·5135	+ 0·023	+0·0032	+0·010
212	400	II. 192	881	43 Arietis ..... σ	5·5	84·17	6	2 45 8·623	+ 3·3023	+ 0·015	—0·0002	0·000
213*	404	II. 202	887	2 Eridani ..... τ^2	4·8	81·30	25	2 45 49·302	+ 2·7242	+ 0·002	—0·0062	—0·023
214	410	II. 215	905	Bradley 410	6·0	83·23	9	2 50 4·711	+ 3·1981	+ 0·012	+0·0048	+0·008
215*	413	II. 219	910	3 Eridani ..... η	4·0	81·12	48	2 50 48·547	+ 2·9230	+ 0·005	+0·0038	+0·015
216	972	...	928	Hydri ..... ν	5·1	83·66	32	2 51 13·435	— 0^s·4499	+ 0·120	...	...
217	415	II. 224	921	48 Arietis ..... ε	4·6	84·89	3	2 52 38·143	+ 3·4212	+ 0·018	—0·0025	0·000
218	419	II. 228	929	91 Ceti ..... λ	4·6	82·62	9	2 53 33·099	+ 3·2088	+ 0·012	—0·0014	—0·003
219	...	...	...	C.Z. II. 1483	8·0	84·86	1	2 54 41·560	+ 1·5136	+ 0·010	...	...
220*	428	II. 244	949	92 Ceti ..... α	2·7	81·29	51	2 56 16·095	+ 3·1315	+ 0·010	—0·0029	—0·001
221*	434*	II. 249	954	11 Eridani ..... τ^3	4·1	81·02	12	2 57 19·324	+ 2·6549	+ 0·002	—0·0124	—0·049
222	429	II. 246	953	25 Persei ..... ρ	Var.	82·67	6	2 57 48·553	+ 3·8143	+ 0·033	+0·0103	+0·024
223	435	II. 252	959	10 Eridani	5·4	82·37	7	2 58 37·569	+ 2·9395	+ 0·006	+0·0029	+0·008
224	436	II. 254	963	26 Persei ..... β	Var.	84·00	2	3 0 41·280	+ 3·8825	+ 0·036	—0·0017	—0·002
225	...	...	...	Lalande 5759	5·6	82·63	9	3 0 52·024	+ 2·9639	+ 0·006	...	...
226†	1001	...	982	Hydri ..... θ	5·8	84·59	8	3 2 1·410	+ 0·0749	+ 0·072	0·000*	0·000
227	446	III. 2	986	57 Arietis ..... δ	4·5	83·60	10	3 5 3·236	+ 3·4105	+ 0·017	+0·0095	+0·013
228*	450	III. 8	994	94 Ceti	5·0	81·05	19	3 6 54·254	+ 3·0448	+ 0·008	+0·0123	+0·049
229†	454*	III. 13	997	12 Eridani	3·8	80·95	13	3 7 11·035	+ 2·5224	+ 0·001	+0·0245	+0·075
230	451	III. 11	999	58 Arietis ..... ζ	4·9	84·78	5	3 8 17·470	+ 3·4407	+ 0·018	—0·0032	—0·001
231	1016	III. 19	1004	Lacaille 1016	6·2	83·44	12	3 8 23·372	+ 2·0982	+ 0·001	...	...
232	456	III. 20	1010	Bradley 456	7½	80·93	1	3 9 56·330	+ 2·9129	+ 0·006	—0·0005	—0·002
233*	457	III. 22	1013	13 Eridani ..... ζ	4·8	81·10	19	3 10 14·852	+ 2·9118	+ 0·005	—0·0021	—0·008
234	1105	...	1038	Lacaille 1105	6¼	83·26	18	3 11 28·791	— 2·2388	+ 0·274	...	...
235	1848	...	...	Lacaille 1848	7½	81·79	8	3 13 11·058	—38·6395	+21·744	...	...
236	466*	III. 39	1031	15 Eridani	5·0	81·97	6	3 13 17·190	+ 2·6499	+ 0·002	—0·0004	—0·001
237*	469	III. 43	1037	16 Eridani ..... τ^4	3·8	81·60	19	3 14 24·022	+ 2·6636	+ 0·003	+0·0013	+0·004
238†	1060	III. 47	1044	Eridani ..... e	4·4	83·64	14	3 15 19·694	+ 2·1170	+ 0·002	+0·270	+0·367
239	464	III. 41	1043	33 Persei ..... α	1·9	80·00	2	3 16 7·120	+ 4·2522	+ 0·048	+0·0015	+0·008
240	1067	...	1049	Lacaille 1067	5·8	82·63	6	3 16 22·583	+ 2·6215	+ 0·002	...	...
241	477	III. 55	1057	1 Tauri ..... o	3·8	81·05	45	3 18 37·518	+ 3·2269	+ 0·012	—0·0052	—0·021
242†	1131	...	1070	Hydri ..... ι	5·9	84·60	6	3 18 50·610	— 1·6476	+ 0·196	+0·040*	+0·016
243	481	III. 63	1068	2 Tauri ..... ξ	3·8	84·35	7	3 20 56·191	+ 3·2413	+ 0·012	+0·0032	+0·002
244	1107	III. 73	1077	Lacaille 1107	6·5	83·38	11	3 22 5·168	+ 2·1419	+ 0·002	...	...
245	1108	III. 76	1082	Fornacis ..... χ^2	5·6	83·06	1	3 23 6·040	+ 2·3176	+ 0·002	...	...

213. Fundamental Star for Southern Zones. 221. Fundamental Star for Southern Zones. 223. ρ^3 Eridani in B.A.C.
229. α Eridani in B.A.C, but evidently in error, as the same letter is also there affixed to No. 146 of this Catalogue; α Fornacis in A.G.C.
238. B.A.C. gives no letter. 245. B.A.C. gives no letter.

No.	Mean Date. 1800+	No. of Obs.	Mean Dec. 1885·0.	Annual Precession. 1885·0.	Secular Variation. 1885·0.	Annual Proper Motion. μ_δ.	Corr. for μ_δ to 1885·0.	Fallows and Henderson.	Johnson.	Cape Catalogues. 1840.	1850.	1860.	1880.	A.G.C. 1875.	Melbourne, 1870 and 1880.
			° ′ ″	″	″	″	″								
211	...	...	+ 26 47 (9)	+15·179	− 0·34	− 0·119	...	...	...	...	..	100	...	..	...
212	84·00	5	+ 14 36 25·98	+15·069	− 0·32	− 0·039	−0·04	...	...	...	...	...	...	...	*165*
213*	81·84	17	− 21 28 42·62	+15·030	− 0·27	− 0·023	−0·07	50	52	265	416	...	1164	3034	*166*
214	81·67	3	+ 7 55 5·29	+14·780	− 0·32	− 0·060	−0·20	...	...	...	...	...	...	...	...
215	81·67	24	− 9 21 22·43	+14·737	− 0·30	− 0·215	−0·72	51*	53	...	429	...	1204	3146	*171*
216	83·75	31	− 75 32 11·93	+14·712	+ 0·04	...	...	...	...	284	437	...	1211	3171	...
217*	84·89	3	+ 20 52 47·34	+14·629	− 0·35	− 0·006	−0·01	...	...	277	...	105	...	...	*174*
218	81·94	3	+ 8 26 55·92	+14·574	− 0·33	− 0·006	−0·02	...	...	281	439	...	...	...	...
219	84·86	1	− 59 21 56·22	+14·505	− 0·16	...	...	...	...	...	...	...	...	...	...
220	82·62	32	+ 3 38 16·73	+14·409	− 0·32	− 0·073	−0·17	52*	...	291	451	107	1250	...	154*
221*	82·68	12	− 24 4 32·81	+14·345	− 0·28	− 0·037	−0·09	53	56	294	454	...	1258	3284	*177*
222*	82·88	16	+ 38 23 38·22	+14·314	− 0·40	− 0·088	−0·19	...	...	...	...	...	...	...	...
223*	81·91	2	− 8 3 4·91	+14·265	− 0·31	+ 0·009	+0·03	...	57	...	458	...	1262	3305	...
224*	84·00	2	+ 40 30 42·50	+14·138	− 0·41	+ 0·010	+0·01	...	...	299	...	...	...	...	...
225	81·95	2	− 6 32 3·82	+14·126	− 0·31	...	...	...	...	...	...	...	...	3346	...
226	84·63	9	− 72 21 5·13	+14·055	− 0·01	0·00*	0·00	...	58	304	467	109	1286	3375	160*
227	84·00	7	+ 19 17 27·33	+13·864	− 0·37	+ 0·005	+0·01	...	...	306	469	110	1295	...	162*
228	81·40	13	− 1 37 36·11	+13·747	− 0·33	− 0·073	−0·26	...	...	...	471	...	1311	3455	*185*
229*	81·60	13	− 29 26 29·68	+13·729	− 0·27	+ 0·656	+2·23	55	59	308	473	111	1317	3462	*186*
230	84·78	5	+ 20 37 2·78	+13·658	− 0·37	− 0·070	−0·02	...	...	...	...	112	...	..	...
231	83·44	12	− 44 51 4·98	+13·652	− 0·23	...	...	...	...	312	477	...	1328	3487	...
232	80·93	1	− 9 11 47·98	+13·552	− 0·32	− 0·06	−0·24	...	...	...	480	...	1341	3517	...
233	82·16	10	− 9 14 50·95	+13·532	− 0·32	+ 0·042	+0·12	...	60	...	481	...	1345	3523	*187*
234	83·33	19	− 79 25 31·21	+13·452	+ 0·24	...	...	...	...	...	493	113	1359	3568	...
235	81·96	5	− 88 37 45·09	+13·344	+ 4·20	...	...	...	...	...	...	...	1396	3715	171*
236	81·94	3	− 22 55 55·48	+13·335	− 0·29	+ 0·008	+0·02	...	...	322	491	...	1371	3588	...
237	82·92	17	− 22 10 37·26	+13·262	− 0·30	+ 0·037	+0·08	56	61	324	495	...	1377	3607	*189*
238*	83·64	14	− 43 30 38·06	+13·201	− 0·24	+ 0·75	+1·02	...	62	327	499	115	1384	3623	166
239	82·50	12	+ 49 27 5·78	+13·149	− 0·47	− 0·033	−0·08	*171*	...	326	498	116	1392	...	167*
240	82·05	2	− 24 2 54·19	+13·132	− 0·29	...	...	...	...	...	503	...	1395	3641	...
241	81·47	19	+ 8 37 24·80	+12·981	− 0·36	− 0·068	−0·24	...	...	...	507	...	1407	...	*193*
242	84·65	7	− 77 48 28·14	+12·967	+ 0·18	+ 0·05*	+0·02	...	...	337	509	118	1412	3704	...
243	84·75	6	+ 9 19 51·41	+12·828	− 0·37	− 0·049	−0·01	...	...	333	...	...	1425	...	...
244	83·42	12	− 42 2 25·89	+12·750	− 0·25	...	...	...	...	338	514	...	1433	3757	*195*
245*	...	...	− 36 4 (54)	+12·681	− 0·27	...	.	...	...	339	515	...	1440	3778	...

217. Close double Star observed as one mass. Magnitudes, in the *Mensuræ Micrometricæ*, 6·0 and 5·7.
222. Limits of magnitude. 3·4–4·2 : Period 33^{d}. according to Schmidt, but Schönfeld thinks the var. irregular.
224. Limits of magnitude 2·3–3·5 : Period about 3^{d}.
238. Proper Motion from Gill & Elkin, "Parallax of Southern Stars."

No.	Bradley or Lacaille.	Piazzi.	B.A.C.	Star's Name.	Mag.	Mean Date. 1800+	No. of Obs.	Mean R.A. 1885·0.	Annual Precession. 1885·0.	Secular Variation. 1885·0.	Annual Proper Motion. μ_α.	Corr. for μ_α to 1885·0.
								h m s	s	s	s	s
246*	...	...	...	Lalande 6476	5·7	80·71	16	3 24 10·090	+2·8311	+0·005	−0·0024	−0·010
247	486	III. 77	1087	5 Tauri .....*f*	4·3	83·50	4	3 24 31·483	+3·3040	+0·013	−0·0002	0·000
248*	487	III. 80	1090	17 Eridani.....	4·8	81·26	14	3 24 54·670	+2·9726	+0·007	−0·0006	−0·002
249*	493	III. 89	1100	18 Eridani .....ε	3·7	81·42	50	3 27 30·985	+2·8898	+0·005	−0·0675	−0·242
250†	495	III. 95	1104	19 Eridani .....τ^5	4·2	82·67	10	3 28 42·439	+2·6453	+0·003	+0·0014	+0·003
251*	498	III. 101	1115	20 Eridani.....	5·3	80·54	17	3 31 3·014	+2·7297	+0·004	−0·0001	0·000
252	1222	...	...	Lacaille 1222	7½	83·34	26	3 31 27·856	−1·9440	+0·203	...	...
253	505	III. 116	1134	22 Eridani.....	5·5	81·85	7	3 34 56·766	+2·9670	+0·007	−0·0027	−0·009
254	...	III. 123	1138	38 Persei .....*o*	4·0	84·62	1	3 37 6·390	+3·7486	+0·023	−0·0016	−0·001
255*	515	III. 134	1148	23 Eridani .....δ	3·7	81·55	18	3 37 44·384	+2·8776	+0·006	−0·0081	−0·028
256	509	III. 130	1147	17 Tauri.....	3·8	84·67	7	3 38 2·831	+3·5514	+0·018	−0·0001	0·000
257	1198	III. 149	1159	Eridani .....*h*	4·8	84·86	1	3 38 34·150	+2·2304	+0·002	−0·006*	−0·001
258*	517	III. 143	1153	24 Eridani.....	5·1	81·09	19	3 38 40·065	+3·0433	+0·008	−0·0015	−0·006
259	1212	...	...	Lacaille 1212	7·2	83·03	2	3 39 54·290	+2·1967	+0·002	...	...
260	521	III. 152	1166	25 Tauri .....η	3·0	82·48	19	3 40 38·965	+3·5552	+0·018	−0·0004	−0·001
261	...	...	...	A.G.C. 4183	8¼	84·86	1	3 41 28·740	+0·8356	+0·025	...	...
262	1221	...	...	Lacaille 1221	7¼	83·95	5	3 41 49·100	+2·5421	+0·003	...	...
263	1223	...	...	Lacaille 1223	7½	83·94	4	3 41 51·060	+2·5539	+0·003	...	...
264*	530*	III. 168	1181	27 Eridani .....τ^6	4·3	81·09	16	3 41 54·036	+2·5914	+0·003	−0·0127	−0·050
265	532*	III. 173	1191	28 Eridani .....τ^7	4·8	83·93	5	3 42 42·970	+2·5754	+0·003	+0·0014	+0·001
266	1231	...	...	Lacaille 1231	6·8	83·91	5	3 43 9·630	+2·5168	+0·003	...	...
267	1234	III. 176	1194	Fornacis .....ρ	5·7	83·03	2	3 43 17·290	+2·4205	+0·003	...	...
268	...	...	...	C.Z. III. 1347	9·0	84·86	1	3 44 37·330	+0·8435	+0·024	...	...
269	1414	...	...	Lacaille 1414	8¼	82·81	18	3 45 1·019	−9·8788	+1·449	...	...
270†	1248	III. 189	1201	Eridani .....*g*	4·1	84·70	3	3 45 9·000	+2·2480	+0·003	...	...
271*	538	III. 191	1212	30 Eridani.....	5·4	80·98	23	3 47 0·834	+2·9607	+0·006	−0·0022	−0·009
272	543*	III. 198	1217	33 Eridani .....τ^8	4·7	83·02	3	3 48 49·070	+2·5495	+0·003	+0·0012	+0·002
273†	1322	...	1230	Hydri .....γ	3·2	84·00	9	3 49 1·913	−1·0079	+0·107	+0·012*	+0·012
274	1275	III. 202	1220	Eridani .....*i*	5·3	84·63	3	3 49 16·030	+2·2824	+0·003	...	...
275	...	...	...	Lalande 7273	6·1	82·23	9	3 49 51·703	+2·8238	+0·005	...	...
276	539	III. 196	1219	45 Persei .....ε	3·0	81·58	5	3 50 8·336	+4·0080	+0·029	+0·0004	+0·002
277	542	III. 201	1228	46 Persei .....ξ	4·1	84·00	2	3 51 30·260	+3·8788	+0·025	−0·0006	−0·001
278	1299	III. 216	1236	Lacaille 1299	7·0	83·02	3	3 52 22·380	+2·1436	+0·003	...	...
279*	546	III. 210	1234	34 Eridani .....γ	3·1	80·00	15	3 52 39·829	+2·7926	+0·005	+0·0029	+0·015
280	...	...	...	Lalande 7384	5·8	82·35	11	3 53 12·362	+2·9570	+0·006	...	...

248. *v* Eridani in A.G.C.
264. Fundamental Stars for Southern Zones.
270. v^2 Eridani in B.A.C.

257. v^1 Eridani in B.A.C. : this letter is affixed to No. 309.
267. B.A.C. assigns this Star to Eridanus.
274. v^3 Eridani in B.A.C.

No.	Mean Date. 1800+	No. of Obs.	Mean Dec. 1885·0.	Annual Precession. 1885·0.	Secular Variation. 1885·0.	Annual Proper Motion. μ_δ.	Corr. for μ_δ to 1885·0.	Fallows and Henderson.	Johnson.	Cape Catalogues. 1840.	1850.	1860.	1880.	A.G.C. 1875.	Melbourne, 1870 and 1880.
			° ′ ″	″	″	″	″								
246	81·54	12	− 13 4 17·15	+12·609	− 0·33	+ 0·020	+0·07	...	...	...	...	...	...	3805	*197*
247	84·00	3	+ 12 32 30·44	+12·585	− 0·38	+ 0·011	+0·01	57	...	342	518	...	1450	...	...
248*	82·53	12	− 5 28 12·45	+12·557	− 0·34	+ 0·002	0·00	58	63	...	519	...	1453	3818	*198*
249	82·12	26	− 9 50 53·52	+12·379	− 0·33	+ 0·011	+0·03	...	64	348	524	...	1467	3872	*200*
250	83·15	5	− 22 1 9·39	+12·298	− 0·31	− 0·040	−0·07	59	65	351	526	...	1471	3897	...
251	81·30	12	− 17 50 54·41	+12·135	− 0·32	− 0·001	...	...	...	355	533	...	1490	3938	*204*
252	83·50	22	− 78 0 15·76	+12·106	+ 0·22	...	...	...	...	...	...	...	1496	3979	...
253	81·66	3	− 5 34 57·62	+11·862	− 0·35	+ 0·009	+0·03	...	...	...	542	...	1524	4037	...
254	84·62	1	+ 31 55 21·32	+11·709	− 0·45	− 0·010	0·00	...	...	...	...	...	...	...	...
255	82·32	17	− 10 9 13·82	+11·664	− 0·34	+ 0·758	+2·03	62	68	367	548	...	1548	4100	*208*
256	84·67	7	+ 23 45 2·73	+11·642	− 0·43	− 0·036	−0·01	...	...	365	547	123	1551	...	*209*
257*	84·86	1	− 37 40 37·05	+11·605	− 0·27	− 0·09*	−0·01	...	70	371	553	125	1557	4121	...
258	81·90	12	− 1 31 35·92	+11·598	− 0·37	+ 0·003	+0·01	...	...	...	551	...	1558	4120	*210*
259	...	...	− 38 39 (15)	+11·509	− 0·27	...	...	...	...	...	...	...	1566	4145	...
260	83·00	18	+ 23 44 54·89	+11·456	− 0·43	− 0·040	−0·08	*155*	...	372	555	128	1571	...	184*
261	84·86	1	− 63 48 38·81	+11·396	− 0·11	...	...	...	...	...	...	...	...	4183	185
262	83·95	5	− 25 42 56·22	+11·372	− 0·31	...	...	...	...	...	...	...	1589	4188	...
263	83·95	5	− 25 12 47·41	+11·369	− 0·31	...	...	...	...	...	...	...	1590	4190	...
264*	82·49	14	− 23 35 22·61	+11·366	− 0·31	− 0·530	−1·33	64	72	375	561	...	1591	4191	*213*
265	83·93	5	− 24 13 53·51	+11·307	− 0·31	+ 0·049	+0·05	...	73	378	565	...	1598	4208	...
266	83·91	5	− 26 40 59·87	+11·274	− 0·31	...	...	...	...	...	...	...	1600	4214	...
267*	...	...	− 30 30 (52)	+11·266	− 0·30	...	...	...	...	379	567	...	1601	4219	...
268	84·86	1	− 63 31 7·97	+11·169	− 0·11	...	...	...	...	...	...	...	...	...	...
269	82·80	17	− 85 5 38·09	+11·140	+ 1·19	...	...	...	...	...	...	...	1630	4304	...
270*	84·70	3	− 36 32 56·40	+11·130	− 0·28	...	...	...	76	384	573	134	1616	4256	191*
271	81·41	12	− 5 42 19·79	+10·994	− 0·36	− 0·007	−0·03	...	...	...	577	...	1641	4303	*217*
272	...	...	− 24 57 (13)	+10·862	− 0·32	− 0·006	...	...	...	386	581	135	1649	4336	...
273	84·00	9	− 74 35 27·58	+10·846	+ 0·12	+ 0·12*	+0·12	68*	79	393	590	138	1656	4353	194*
274*	84·63	3	− 35 4 22·74	+10·829	− 0·28	...	...	...	78	388	583	136	1655	4346	*218*
275	82·05	4	− 12 26 9·27	+10·785	− 0·35	...	...	...	...	...	...	...	...	4357	...
276	82·38	13	+ 39 40 35·57	+10·765	− 0·50	− 0·016	−0·04	...	...	387	...	...	...	...	...
277	84·00	2	+ 35 27 34·22	+10·664	− 0·48	− 0·013	−0·01	...	...	...	...	...	...	...	...
278	...	...	− 39 17 (45)	+10·600	− 0·27	...	...	...	...	396	595	...	1681	4404	...
279	82·12	17	− 13 50 10·70	+10·577	− 0·35	− 0·106	−0·31	69*	80	395	594	139	1683	4407	195*
280	82·28	4	− 5 47 37·81	+10·538	− 0·37	...	...	...	...	...	...	..	...	4416	...

No.	Bradley or Lacaille.	Piazzi.	B.A.C.	Star's Name.	Mag.	Mean Date. 1800+	No. of Obs.	Mean R.A. 1885·0.	Annual Precession. 1885·0.	Secular Variation. 1885·0.	Annual Proper Motion. μ_a.	Corr. for μ_a to 1885·0.
								h m s	s	s	s	s
281	548	III. 218	1241	35 Tauri .....λ	Var	82·50	4	3 54 18·493	+3·3184	+0·012	−0·0014	−0·004
282*	553	III. 228	1251	38 Tauri .....ν	4·0	81·35	66	3 57 2·344	+3·1865	+0·009	+0·0001	0·000
283*	...	...	...	Lalande 7685	6·7	81·14	14	4 1 27·654	+2·6867	+0·004	+0·0019	+0·007
284	1592	...	...	Lacaille 1592	6·5	83·11	28	4 3 54·458	−12·1205	+1·688	...	...
285	...	...	...	Lalande 7819	5·9	83·73	11	4 5 15·433	+2·8841	+0·005	...	...
286*	568	IV. 11	1290	38 Eridani .....o^1	4·1	81·38	26	4 6 15·124	+2·9252	+0·006	−0·0006	−0·002
287	1444	...	1319	Lacaille 1444	6·8	82·70	16	4 7 53·968	−2·9654	+0·220	...	...
288*	574	IV. 26	1303	39 Eridani .....A	4·9	81·17	12	4 8 55·443	+2·8522	+0·005	−0·0025	−0·010
289	573	IV. 23	1304	49 Tauri .....μ	4·3	82·32	10	4 9 17·398	+3·2516	+0·009	−0·0003	−0·001
290	578	IV. 29	1309	40 Eridani .....o^2	4·5	83·70	16	4 9 58·926	+2·9093	+0·006	−0·1442	−0·332
291	1393	...	...	Lacaille 1393	6·3	83·05	3	4 10 52·000	+2·5552	+0·003	...	...
292	583	IV. 39	1328	54 Tauri .....γ	3·9	82·57	7	4 13 14·956	+3·4002	+0·011	+0·0073	+0·018
293	590*	IV. 50	1333	41 Eridani .....v^4	3·3	84·86	1	4 13 32·410	+2·2638	+0·003	−0·0005	−0·001
294	1409	...	1334	Lacaille 1409	6·1	82·53	2	4 13 42·525	+2·5587	+0·004	...	...
295	...	...	...	Lalande 8154	6·3	83·59	12	4 15 0·070	+2·9354	+0·006	...	...
296*	...	...	...	Lalande 8205	5·3	80·38	13	4 15 37·998	+2·6135	+0·004	+0·0004	+0·002
297	1424	IV. 65	1348	Lacaille 1424	5·8	83·06	3	4 15 38·270	+1·8907	+0·004	...	...
298	594	IV. 57	1346	61 Tauri .....δ	4·0	82·00	1	4 16 18·060	+3·4463	+0·012	+0·0066	+0·020
299*	602	IV. 72	1360	42 Eridani .....ξ	5·3	80·86	14	4 17 57·294	+2·9878	+0·006	−0·0048	−0·020
300	1438	IV. 81	1368	Lacaille 1438	6·7	83·06	3	4 18 54·560	+2·2001	+0·003	...	...
301	609	IV. 87	1376	74 Tauri ..... ε	3·7	82·14	7	4 21 54·087	+3·4895	+0·012	+0·0070	+0·020
302	...	...	...	A.G.C. 4987	9½	84·86	1	4 21 54·900	+0·3409	+0·030	...	...
303	1455	...	...	Lacaille 1455	7·0	83·06	3	4 22 7·780	+2·2798	+0·003	...	...
304	615	IV. 94	1386	4 Eridani.....	5·6	82·27	12	4 22 35·492	+3·0963	+0·007	+0·0002	+0·001
305	...	...	...	A.G.C. 5045	8·0	84·86	1	4 24 49·830	+0·3158	+0·029	...	...
306†	1579	...	1426	Mensæ .....δ	5·8	84·64	5	4 25 46·924	−4·2375	+0·278	...	...
307*	624	IV. 110	1403	45 Eridani	4·9	80·96	22	4 25 59·687	+3·0662	+0·007	−0·0013	−0·005
308	...	...	...	W.B. IV. 585	5·8	82·26	9	4 28 41·402	+2·8727	+0·005	...	...
309	636*	IV. 130	1422	50 Eridani .....v^1	4·4	80·84	12	4 28 59·885	+2·3606	+0·003	−0·0101	−0·042
310	630	IV. 125	1420	87 Tauri .....α	1·0	82·86	14	4 29 19·281	+3·4326	+0·011	+0·0035	+0·007
311	...	...	...	.....	8½†	84·97	2	4 29 34·590	+0·2528	+0·030	...	...
312*	637	IV. 133	1429	48 Eridani .....ν	4·1	80·81	15	4 30 34·374	+2·9949	+0·006	−0·0023	−0·010
313	642	IV. 140	1435	51 Eridani c	5·3	82·29	8	4 31 48·838	+3·0139	+0·006	+0·0026	+0·007
314*	647	IV. 150	1441	53 Eridani.....	3·9	81·62	13	4 32 54·804	+2·7506	+0·004	−0·0077	−0·026
315	1839	...	...	Lacaille 1839	8¼	81·89	16	4 33 25·486	−17·3751	+2·247	...	...

290. *d* Eridani in B.F.
293. X Eridani in A.G.C., v^4 in B.A.C. and Auwers' Bradley. Auwers does not use v^2, *vide* No. 270.
296. Fundamental Star for Southern Zones.
298. δ^1 Tauri in B.A.C.
309. v^6 Eridani in B.A.C.

No.	Mean Date. 1800+	No. of Obs.	Mean Dec. 1885·0.	Annual Precession. 1885·0.	Secular Variation. 1885·0.	Annual Proper Motion. μ_δ.	Corr. for μ_δ to 1885·0.	Fallows and Henderson.	Johnson.	Cape Catalogues. 1840.	1850.	1860.	1880.	A.G.C. 1875.	Melbourne, 1870 and 1880.
			° ′ ″	″	″	″	″								
281*	84·00	1	+ 12 9 52·06	+10·454	— 0·42	— 0·009	—0·01	...	...	...	596	...	...	...	...
282	81·72	28	+ 5 40 10·00	+10·251	— 0·40	— 0·009	—0·03	...	...	...	...	...	1703	...	*224*
283	82·17	12	— 18 21 38·71	+ 9·915	— 0·34	— 0·031	—0·09	...	...	...	...	...	...	4591	*227*
284*	83·37	26	— 85 35 59·11	+ 9·729	+ 1·54	...	...	...	...	...	...	...	1768	4672	*230*
285	83·73	11	— 9 7 13·77	+ 9·626	— 0·37	...	...	...	...	...	...	...	...	4653	...
286	82·19	16	— 7 8 17·97	+ 9·549	— 0·38	+ 0·085	+0·24	75	85	...	616	145	1774	4668	203*
287	83·04	15	— 78 56 25·82	+ 9·422	+ 0·38	...	...	...	...	420	628	...	1785	4723	...
288	82·39	12	— 10 32 32·92	+ 9·343	— 0·37	— 0·160	—0·42	...	86	...	620	147	1789	4725	*232*
289	82·04	3	+ 8 36 12·88	+ 9·315	— 0·42	— 0·012	—0·04	...	...	...	...	...	1793	...	...
290*	83·70	16	— 7 49 53·09	+ 9·261	— 0·38	— 3·442	—7·92	...	87	...	623	...	1801	4751	...
291	...	...	— 23 31 (34)	+ 9·192	— 0·34	...	...	...	...	...	...	...	1806	4772	...
292	84·00	1	+ 15 20 55·75	+ 9·007	— 0·45	— 0·030	—0·03	79	...	421	631	...	1819	...	*234*
293*	84·86	1	— 34 4 46·49	+ 8·984	— 0·30	+ 0·01	0·00	...	89	423	634	151	1822	4821	...
294	82·53	2	— 23 15 4·43	+ 8·971	— 0·34	...	..	...	..	...	633	...	1824	4822	...
295	83·44	12	— 6 31 13·48	+ 8·870	— 0·39	...	...	...	...	...	...	...	...	4849	...
296*	83·05	12	— 20 54 52·86	+ 8·820	— 0·34	+ 0·050	+0·10	...	...	...	...	...	...	4858	*236*
297	...	...	— 44 32 (37)	+ 8·820	— 0·25	...	...	...	...	430	639	154	1840	4859	214
298*	...	...	+ 17 16 (18)	+ 8·767	— 0·45	— 0·025	...	...	...	427	...	...	...	...	...
299	82·16	14	— 4 0 43·91	+ 8·637	— 0·40	— 0·044	—0·12	...	...	...	645	...	1855	4903	*237*
300	...	...	— 35 48 (47)	+ 8·562	— 0·29	...	...	...	...	436	646	...	1863	4926	...
301	85·08	1	+ 18 55 27·97	+ 8·324	— 0·47	— 0·028	...	...	...	439	650	161	1884	...	220*
302	84·86	1	— 65 59 50·60	+ 8·323	— 0·05	...	...	...	...	...	...	...	...	4987	...
303	...	...	— 33 4 (35)	+ 8·305	— 0·31	...	...	...	...	...	...	...	1893	4983	...
304	82·03	4	+ 1 7 30·79	+ 8·270	— 0·41	— 0·031	—0·09	...	...	...	...	...	...	...	...
305	84·86	1	— 66 4 9·57	+ 8·090	— 0·05	...	...	...	...	...	...	...	...	5045	223
306	84·64	5	— 80 28 55·00	+ 8·014	+ 0·56	...	...	...	...	457	671	163	1929	5090	225*
307	81·69	13	— 0 17 29·52	+ 7·996	— 0·41	— 0·017	—0·06	...	...	...	658	...	1924	5059	*240*
308	82·31	4	— 9 12 28·23	+ 7·780	— 0·39	...	...	...	...	...	...	...	...	5129	...
309*	82·52	12	— 29 59 58·05	+ 7·755	— 0·32	— 0·259	—0·64	...	...	455	669	165	1959	5137	*242*
310	83·35	20	+ 16 16 37·67	+ 7·729	— 0·47	— 0·184	—0·30	87*	...	454	668	164	1962	...	227*
311*	84·97	2	— 66 21 30·57	+ 7·708	— 0·04	...	...	...	...	..	...	...	...	...	...
312	82·53	15	— 3 35 18·46	+ 7·628	— 0·41	+ 0·009	+0·02	...	98	...	673	...	1979	5172	*244*
313	82·33	4	— 2 42 14·80	+ 7·527	— 0·41	— 0·071	—0·19	...	...	...	676	167	1984	5199	...
314	82·56	13	— 14 31 45·97	+ 7·438	— 0·38	— 0·162	—0·40	...	101	...	680	...	1993	5226	*247*
315	81·91	11	— 86 31 20·44	+ 7·397	+ 2·35	...	...	...	...	...	...	...	2006	5292	...

281. Limits of magnitude 3·4·4·2 ; Period ($3^{d.}\cdot 22^{h.}\cdot 52^{m.}\cdot 12^{s.}\cdot 0$) subject to marked inequalities.
284. Double.
311. Magnitude from Cape Observations.

No.	Bradley or Lacaille.	Piazzi.	B.A.C.	Star's Name.	Mag.	Mean Date. 1800+	No. of Obs.	Mean R.A. 1885·0.	Annual Precession. 1885·0.	Secular Variation. 1885·0.	Annual Proper Motion. μ_α.	Corr. for μ_α to 1885·0.
								h m s	s	s	s	s
316	648	IV. 159	1449	94 Tauri ..... τ	4·4	82·00	2	4 35 20·580	+3·5948	+0·012	−0·0010	−0·003
317*	653	IV. 166	1451	54 Eridani.....	4·5	81·07	17	4 35 24·649	+2·6212	+0·004	0·0000	0·000
318	1707	...	1481	Lacaille 1707.....	6·9	84·45	2	4 36 18·440	−7·3163	+0·522	...	...
319	1561	...	...	Lacaille 1561	6·8	83·06	3	4 38 6·540	+2·0997	+0·004	...	...
320	656	IV. 178	1465	56 Eridani.....	5·7	82·09	6	4 38 33·830	+2·8802	+0·005	−0·0017	−0·005
321*	657	IV. 183	1469	57 Eridani .... μ	4·3	81·38	50	4 39 45·130	+2·9963	+0·005	−0·0002	−0·001
322	664	IV. 198	1484	58 Eridani.....	5·8	81·92	8	4 42 26·353	+2·6834	+0·004	+0·0081	+0·025
323	1601	IV. 210	1488	Cæli ..... ζ	6·7	83·06	3	4 43 20·390	+2·3366	+0·003	. .	...
324	663	IV. 201	1486	1 Orionis ..... π^3	3·3	84·12	1	4 43 35·850	+3·2221	+0·007	+0·0298	+0·026
325*	673	IV. 215	1498	60 Eridani.....	5·2	83·22	12	4 45 0·573	+2·6993	+0·004	+0·0022	+0·004
326*	670	IV. 213	1495	3 Orionis ..... π^4	4·0	81·76	16	4 45 4·869	+3·1923	+0·007	−0·0011	−0·004
327	1622	...	...	Lacaille 1622	7·3	83·06	3	4 46 31·780	+2·0537	+0·004	...	...
328	675	IV. 226	1508	5 Orionis.....	5·7	81·35	3	4 47 22·960	+3·1238	+0·006	0·0000	0·000
329*	680	IV. 232	1514	8 Orionis ..... π^5	3·9	81·26	38	4 48 15·677	+3·1224	+0·006	−0·0004	−0·001
330	...	...	...	.....	9†	84·97	2	4 49 15·765	+0·0679	+0·028	...	...
331	677	IV. 235	1520	3 Aurigæ ..... ι	2·7	82·17	12	4 49 30·347	+3·8994	+0·014	+0·0006	+0·002
332	689	IV. 250	1529	62 Eridani ..... b	5·4	82·24	10	4 50 44·404	+2·9528	+0·005	−0·0010	−0·003
333	1648	...	1531	Lacaille 1648	6·4	83·06	3	4 50 47·790	+2·4523	+0·003	...	...
334	690	IV. 256	1540	7 Aurigæ .... ε	Var.	84·00	1	4 53 43·000	+4·2949	+0·020	−0·0016	−0·002
335	693	IV. 262	1541	8 Aurigæ ..... ζ	4·0	80·00	2	4 54 26·330	+4·1837	+0·018	−0·0005	−0·003
336*	699	IV. 272	1545	64 Eridani.....	Var.	81·25	23	4 54 35·114	+2·7831	+0·004	+0·0003	+0·001
337	698	IV. 274	1551	102 Tauri ..... ι	4·7	82·00	1	4 56 13·270	+3·5768	+0·009	+0·0040	+0·012
338	...	IV. 285	1553	Piazzi IV. 285	5·1	84·86	2	4 56 26·210	+2·5988	+0·003	...	...
339	1686	IV. 289	1559	Lacaille 1686	5·1	81·47	16	4 57 29·158	+2·4323	+0·003	+0·005*	+0·018
340	702	IV. 286	1557	11 Orionis	4·7	84·12	1	4 57 59·760	+3·4235	+0·008	−0·0002	0·000
341	1752	...	1587	Mensæ..... η	6·0	82·06	12	4 58 30·006	−1·7768	+0·007	...	...
342*	713	IV. 303	1575	2 Leporis ..... ε	3·3	81·40	15	5 0 35·538	+2·5364	+0·003	+0·0004	+0·001
343	711	IV. 304	1584	14 Orionis i	5·4	82·62	7	5 1 37·247	+3·2623	+0·006	+0·0013	+0·003
344*	715	IV. 312	1588	67 Eridani ..... β	2·9	81·19	36	5 2 11·799	+2·9537	+0·004	−0·0066	−0·025
345	...	...	...	A.G.C. 5880	8½	82·10	3	5 3 8·200	+2·3502	+0·003	...	...
346*	720	IV. 323	1597	69 Eridani ..... λ	4·4	82·41	13	5 3 38·568	+2·8693	+0·004	−0·0002	−0·001
347	719	IV. 324	1602	11 Aurigæ ..... μ	4·9	84·00	1	5 5 33·520	+4·1003	+0·014	−0·0047	−0·005
348	724	V. 7	1604	Bradley 724.....	5·9	82·05	1	5 6 0·800	+2·7962	+0·004	+0·0003	+0·001
349	1738	...	...	Lacaille 1738	6·5	82·08	3	5 6 4·230	+2·4368	+0·003	...	...
350	727	V. 11	1608	3 Leporis ..... ι	4·7	81·77	7	5 6 55·974	+2·7956	+0·004	+0·0002	+0·001

313. B.A.C. gives no letter.
324. π^1 Orionis in B.A.C.
326. π^3 Orionis in B.A.C.
341. B.A.C. gives no letter.
342. Fundamental Star for Southern Zones.

No.	Mean Date. 1800+	No. of Obs.	Mean Dec. 1885·0.	Annual Precession. 1885·0.	Secular Variation. 1885·0.	Annual Proper Motion. μ_δ.	Corr. for μ_δ to 1885·0.	Fallows and Henderson.	Johnson.	Cape Catalogues. 1840.	1850.	1860.	1880.	A.G.C. 1875.	Melbourne, 1870 and 1880.
			° ′ ″	″	″	″	″								
316	...	...	+ 22 44 (7)	+ 7·240	— 0·49	— 0·009	...	...	...	465	683	170	2007	...	*248*
317	81·97	12	— 19 53 34·04	+ 7·234	— 0·36	— 0·086	—0·26	...	102	467	685	...	2009	5272	*249*
318	84·45	2	— 83 8 44·06	+ 7·162	+ 0·99	...	...	...	...	487	702	...	2019	5310	236*
319	...	...	— 37 49 (56)	+ 7·014	— 0·29	...	...	...	...	...	...	...	2031	5315	...
320	82·08	3	— 8 43 8·56	+ 6·976	— 0·40	+ 0·001	0·00	...	...	...	692	...	2033	5321	...
321	81·89	27	— 3 27 58·60	+ 6·879	— 0·42	— 0·002	—0·01	...	105	...	695	...	2047	5341	*251*
322	81·70	3	— 17 8 45·06	+ 6·659	— 0·37	+ 0·178	+0·59	...	...	483	704	...	2072	5405	...
323*	...	...	— 30 13 (40)	+ 6·584	— 0·33	...	...	...	...	486	706	...	2081	5431	*253*
324*	84·12	1	+ 6 45 34·44	+ 6·562	— 0·45	+ 0·016	+0·01	...	...	...	...	...	2082	...	...
325	83·16	11	— 16 25 4·27	+ 6·445	— 0·37	+ 0·060	+0·11	...	...	489	708	...	2090	5462	*255*
326*	82·41	12	+ 5 24 27·16	+ 6·439	— 0·44	— 0·002	—0·01	...	...	...	...	...	2093	...	*256*
327	...	...	— 38 45 (37)	+ 6·319	— 0·29	...	...	...	...	...	...	...	2113	5508	...
328	81·04	1	+ 2 19 2·48	+ 6·248	— 0·43	— 0·014	—0·06	...	...	...	...	...	...	...	...
329	81·78	18	+ 2 15 5·77	+ 6·175	— 0·44	— 0·007	—0·02	...	...	...	...	...	2128	...	*259*
330*	84·97	2	— 67 1 30·74	+ 6·091	— 0·01	...	...	...	...	...	...	...	...	...	...
331	81·92	12	+ 32 58 57·81	+ 6·072	— 0·54	— 0·003	—0·01	...	...	495	...	176	2138	...	239*
332	82·05	4	— 5 21 15·29	+ 5·969	— 0·41	+ 0·011	+0·03	...	...	...	720	...	2143	5601	...
333	...	...	— 25 54 (46)	+ 5·963	— 0·34	...	...	...	...	...	721	...	2145	5604	. .
334*	84·00	1	+ 43 39 7·33	+ 5·719	— 0·60	— 0·014	—0·01	...	...	500	...	...	...	...	...
335	82·08	12	+ 40 54 25·35	+ 5·659	— 0·59	— 0·008	—0·02	...	...	501	...	...	...	...	...
336*	81·72	12	— 12 42 27·16	+ 5·645	— 0·39	— 0·095	—0·31	...	...	...	726	...	2172	5689	*265*
337	...	...	+ 21 25 (28)	+ 5·509	— 0·50	— 0·040	...	...	...	504	728	180	...	...	...
338	84·86	2	— 20 13 12·81	+ 5·491	— 0·37	...	...	...	...	...	730	...	2190	5736	...
339	82·15	12	— 26 26 19·78	+ 5·403	— 0·34	— 0·10*	—0·29	...	...	508	734	181	2197	5755	...
340	84·12	1	+ 15 14 33·66	+ 5·359	— 0·48	— 0·031	—0·03	...	...	...	733	...	...	...	...
341*	82·48	11	— 75 6 47·38	+ 5·317	+ 0·25	...	...	...	...	...	746	182	2210	5787	242
342*	82·46	13	— 22 31 34·06	+ 5·139	— 0·36	— 0·068	—0·17	...	109	514	741	186	2225	5816	243*
343	82·10	4	+ 8 20 51·45	+ 5·051	— 0·46	— 0·046	—0·13	...	...	...	...	...	...	...	...
344	81·45	20	— 5 14 9·31	+ 5·004	— 0·42	— 0·065	—0·23	...	111	...	747	...	2234	5848	*274*
345	82·10	3	— 29 7 40·73	+ 4·925	— 0·33	...	...	...	...	...	...	...	...	5880	...
346	82·21	12	— 8 54 8·70	+ 4·881	— 0·41	+ 0·001	0·00	98	112	...	753	...	2248	5888	*277*
347	84·00	1	+ 38 20 50·18	+ 4·718	— 0·58	— 0·071	—0·07	...	...	...	...	...	...	...	...
348	...	...	— 11 59 (37)	+ 4·680	— 0·40	+ 0·084	...	...	...	...	757	...	2263	5948	...
349	82·08	3	— 26 3 14·91	+ 4·676	— 0·35	. .	...	...	...	...	...	...	2264	5950	...
350	81·41	3	— 12 0 28·98	+ 4·602	— 0·40	— 0·002	—0·01	...	113	...	761	...	2275	5968	...

330. Magnitude from Cape Observations.

334. Limits of magnitude 3·0 and 4·5 ; Period irregular.

336. Gould's S Eridani ; Limits of magnitude $4\frac{3}{4}$–$5\frac{1}{4}$; Sawyer's observations do not indicate variability.

No.	Bradley or Lacaille.	Piazzi.	B.A.C.	Star's Name.	Mag.	Mean Date. 1800+	No. of Obs.	Mean R.A. 1885·0.	Annual Precession. 1885·0.	Secular Variation. 1885·0.	Annual Proper Motion. μ_α.	Corr. for μ_α to 1885·0.
								h m s	s	s	s	s
351	722	V. 6	1613	13 Aurigæ .....α	0·2	80·00	3	5 8 11·670	+4·4159	+0·017	+0·0079	+0·040
352	...	...	...	Lalande 9832	6·5	82·07	3	5 8 45·840	+2·7294	+0·004	...	...
353*	736	V. 18	1623	19 Orionis .....β	0·3	80·52	21	5 9 0·613	+2·8813	+0·004	−0·0012	−0·005
354	1763	...	...	Lacaille 1763	7·0	82·09	3	5 9 51·010	+2·4263	+0·003	...	...
355	...	...	...	.....	9†	84·97	2	5 10 5·750	−0·1596	+0·024	...	...
356†	1921	...	1675	Mensæ.....ξ	5·8	82·08	10	5 11 59·925	−7·0266	+0·276	...	...
357*	742	V. 40	1638	20 Orionis .....τ	3·7	81·35	30	5 12 1·353	+2·9125	+0·004	−0·0024	−0·009
358	...	...	...	Lalande 9986	5·9	82·06	3	5 13 43·520	+2·6404	+0·003	...	...
359	751	V. 60	1660	22 Orionis .....o	4·7	81·70	8	5 15 53·461	+3·0610	+0·004	−0·0009	−0·003
360*	765	V. 81	1684	28 Orionis .....η	3·5	81·02	16	5 18 41·722	+3·0149	+0·004	−0·0015	−0·006
361	763	V. 78	1685	25 Orionis.....	4·6	81·64	7	5 18 46·671	+3·1124	+0·004	−0·0026	−0·009
362	761	V. 80	1687	24 Orionis .....γ	1·9	84·00	1	5 18 57·790	+3·2164	+0·005	−0·0019	−0·002
363	756	V. 72	1681	112 Tauri .....β	1·9	82·23	13	5 19 1·363	+3·7870	+0·008	+0·0013	+0·004
364*	781	V. 113	1715	9 Leporis .....β	3·0	81·70	13	5 23 19·038	+2·5697	+0·003	−0·0015	−0·005
365	...	...	...	Lalande 10325.....	6·0	82·10	7	5 23 39·800	+2·9907	+0·004	...	...
366	779	V. 112	1717	31 Orionis.....	Var.	84·16	2	5 23 53·570	+3·0451	+0·004	−0·0017	−0·001
367	2066	...	...	Lacaille 2066	6·8	81·81	11	5 25 0·207	−9·4717	+0·318	...	...
368	787	V. 126	1730	34 Orionis .....δ	Var.	81·14	29	5 26 7·881	+3·0635	+0·004	−0·0014	−0·005
369	789	V. 130	1731	36 Orionis v	4·7	81·81	7	5 26 22·084	+2·9009	+0·003	−0·0002	−0·001
370*	796	V. 139	1741	11 Leporis .....α	2·7	82·25	12	5 27 39·458	+2·6447	+0·003	−0·0011	−0·003
371	792	V. 138	1748	37 Orionis .....φ¹	4·4	84·16	1	5 28 30·340	+3·2919	+0·004	−0·0018	−0·002
372	794	V. 141	1749	39 Orionis .....λ	4·0†	84·12	1	5 28 48·150	+3·3025	+0·004	−0·0015	−0·001
373	803	V. 149	1759	42 Orionis .....c¹	4·6	81·99	7	5 29 42·771	+2·9584	+0·003	−0·0013	−0·004
374*	806	V. 151	1762	44 Orionis .....ι	3·0	82·00	11	5 29 48·464	+2·9334	+0·003	−0·0007	−0·002
375*	809	V. 160	1765	46 Orionis .....ε	1·8	81·28	14	5 30 22·728	+3·0429	+0·003	−0·0018	−0·007
376†	1948	...	1791	Doradûs .....β	3·9	84·14	2	5 32 37·660	+0·5154	+0·009	...	...
377	1911	V. 177	1783	Columbæ .....v¹	5·7	83·05	3	5 32 43·920	+2·3684	+0·003	...	...
378	814	V. 172	1780	48 Orionis .....σ	3·7	81·54	13	5 32 58·359	+3·0105	+0·003	−0·0018	−0·006
379	819	V. 188	1794	50 Orionis .....ζ	2·0*	84·15	2	5 34 57·335	+3·0259	+0·003	−0·0008	−0·001
380†	1938	V. 196	1802	Columbæ .....α	2·5	83·60	5	5 35 29·096	+2·1712	+0·003	+0·0014	+0·007
381	822	V. 194	1806	51 Orionis .....b	5·3	81·55	11	5 36 31·787	+3·1053	+0·003	−0·0050	−0·002
382	1955	V. 205	1809	Lacaille 1955	6·6	83·05	3	5 37 14·510	+2·1933	+0·003	...	...
383*	837	V. 219	1823	13 Leporis .....γ	3·8	81·91	22	5 39 40·165	+2·5212	+0·002	−0·0230	−0·071
384	1986	...	1842	Lacaille 1896	7¼	83·05	3	5 41 36·320	+1·9793	+0·003	...	...
385*	843	V. 230	1840	14 Leporis .....ζ	3·7	82·09	14	5 41 44·678	+2·7186	+0·003	−0·0018	−0·005

356. B.A.C. gives no letter
373. *c* Orionis in B.A.C.
383. Fundamental Star for Southern Zones.

361. φ¹ Orionis in B.A.C.
377. B.A.C. gives no letter.

No.	Mean Date. 1800+	No. of Obs.	Mean Dec. 1885·0.	Annual Precession. 1885·0.	Secular Variation. 1885·0.	Annual Proper Motion. μ_δ.	Corr. for μ_δ to 1885·0.	Fallows and Henderson.	Johnson.	Cape Catalogues. 1840.	1850.	1860.	1880.	A.G.C. 1875.	Melbourne, 1870 and 1880.
			° ′ ″	″	″	″	″								
351	82·17	12	+ 45 52 50·20	+ 4·494	— 0·63	— 0·424	—1·20	*169*	...	526	762	...	2285	...	245*
352	82·07	3	— 14 44 29·43	+ 4·447	— 0·39	...	...	...	...	...	...	...	...	6002	...
353	82·89	36	— 8 20 7·34	+ 4·424	— 0·41	+ 0·005	+0·01	99*	116	529	769	189	2292	...	247*
354	82·09	3	— 26 20 23·48	+ 4·355	— 0·35	...	...	...	...	...	...	...	2301	6026	...
355*	84·97	2	— 68 0 25·28	+ 4·332	+ 0·02	...	...	...	...	...	...	...	...	...	...
356*	82·55	12	— 82 37 18·53	+ 4·169	+ 1·00	...	...	...	...	548	794	...	2330	6105	249*
357	81·66	14	— 6 58 10·04	+ 4·168	— 0·42	— 0·003	—0·01	100	117	...	774	...	2319	6066	*296*
358	82·06	3	— 18 15 12·46	+ 4·022	— 0·38	...	...	...	...	...	...	...	...	6109	...
359	81·46	5	— 0 29 48·81	+ 3·836	— 0·44	+ 0·009	+0·03	...	...	539	786	193	2352	6147	...
360	81·97	14	— 2 30 13·64	+ 3·594	— 0·43	+ 0·010	+0·03	102	119	...	800	...	2378	6217	*303*
361*	81·08	3	+ 1 44 24·47	+ 3·587	— 0·45	— 0·009	—0·04	...	...	...	...	...	...	...	...
362	84·00	2	+ 6 14 40·70	+ 3·571	— 0·46	— 0·015	—0·02	*133*	...	...	...	...	2381	...	...
363	82·17	12	+ 28 30 33·82	+ 3·567	— 0·55	— 0·180	—0·51	*161*	...	546	798	196	2382	...	252*
364	82·28	10	— 20 51 6·43	+ 3·196	— 0·37	— 0·079	—0·21	104	120	...	815	...	2428	6344	*306*
365	82·09	3	— 3 32 21·01	+ 3·166	— 0·43	...	...	...	...	...	...	...	...	6350	...
366*	84·16	2	— 1 11 1·08	+ 3·146	— 0·44	— 0·017	—0·01	...	121	...	817	...	2436	6359	...
367	82·25	11	— 83 59 11·52	+ 3·051	+ 1·36	...	...	...	...	...	...	...	2452	6422	261*
368*	82·24	17	— 0 23 6·97	+ 2·953	— 0·44	— 0·005	—0·01	105*	122	559	823	200	2454	6401	256*
369	81·40	3	— 7 23 14·39	+ 2·932	— 0·42	— 0·006	—0·02	...	123	...	824	...	2458	6407	...
370	83·08	13	— 17 54 19·42	+ 2·821	— 0·38	+ 0·010	+0·02	107*	125	564	829	202	2466	6436	260*
371	84·15	2	+ 9 24 38·83	+ 2·745	— 0·48	— 0·002	0·00	...	...	...	...	...	2473	...	...
372*	84·12	1	+ 9 51 22·83	+ 2·722	— 0·48	— 0·018	—0·02	...	...	...	...	...	2477	...	...
373*	81·59	2	— 4 54 54·10	+ 2·642	— 0·43	+ 0·018	+0·06	...	126	...	840	...	2489	6483	...
374	82·50	12	— 5 59 10·28	+ 2·635	— 0·42	+ 0·007	+0·02	...	127	...	843	...	2493	6486	*314*
375	82·40	10	— 1 16 34·88	+ 2·584	— 0·44	+ 0·006	+0·02	110*	128	573	845	203	2495	6501	266*
376	84·14	2	— 62 33 53·58	+ 2·389	— 0·08	...	...	...	131	584	862	205	2516	6561	268
377*	...	...	— 27 56 (21)	+ 2·380	— 0·34	...	...	...	...	580	855	...	2515	6555	...
378	81·45	7	— 2 40 2·47	+ 2·360	— 0·44	+ 0·009	+0·03	111	129	...	853	...	2517	6558	...
379*	84·15	2	— 2 0 15·20	+ 2·188	— 0·44	+ 0·010	+0·01	113*	132	...	863	...	2539	6614	...
380*	84·00	6	— 34 8 9·54	+ 2·141	— 0·32	— 0·045	—0·04	114*	133	586	866	206	2547	6633	270*
381	81·07	6	+ 1 25 4·85	+ 2·050	— 0·45	— 0·011	—0·04	...	...	...	...	...	...	...	...
382	...	...	— 33 27 (29)	+ 1·989	— 0·32	...	...	...	...	588	869	...	2562	6676	*320*
383*	82·47	19	— 22 29 10·20	+ 1·777	— 0·36	— 0·366	—0·93	...	134	...	876	...	2582	6733	*321*
384	...	...	— 39 21 (35)	+ 1·607	— 0·29	...	...	...	...	...	883	...	2595	6776	...
385	82·45	14	— 14 51 56·12	+ 1·595	— 0·40	+ 0·009	+0·02	...	135	598	881	...	2596	6778	*324*

355. Magnitude from Cape Observations.

366. Limits of magnitude in *Uranometria Argentina* 4¾–6.

368. Limits of magnitude 2·2–2·7; Auwers found period 16^d.; Schönfeld slight variation but no period; Chandler and Sawyer find no fluctuation.

372. Magnitude from Struve's *Mensuræ Micrometricæ*.

379. Double, companion 9·4 in B.D.

380. Proper motion from Newcomb's Catalogue of 1098 Standard Stars.

No.	Bradley or Lacaille.	Piazzi.	B.A.C.	Star's Name.	Mag.	Mean Date. 1800+	No. of Obs.	Mean R.A. 1885·0.	Annual Precession. 1885·0.	Secular Variation. 1885·0.	Annual Proper Motion. μ_a.	Corr. for μ_a to 1885·0.
								h m s	s	s	s	s
386*	844	V. 234	1843	53 Orionis .....κ	2·2	82·06	17	5 42 18·106	+ 2·8443	+0·003	—0·0017	—0·005
387	...	V. 239	1851	Piazzi V. 239	5·7	82·11	6	5 43 42·510	+ 3·3036	+0·003	...	...
388	1998	...	1859	Lacaille 1998	7·2	83·04	3	5 44 7·680	+ 2·1907	+0·003	0·000*	0·000
389	2021	...	1861	Pictoris .....β	3·9	84·17	1	5 44 33·740	+ 1·4188	+0·004	0·000*	0·000
390	2138	...	1898	Mensæ .....π	5·8	81·94	11	5 46 20·503	— 4·9500	+0·051	+0·034*	+0·104
391*	858	V. 261	1871	15 Leporis .....δ	4·0	81·58	13	5 46 22·470	+ 2·5630	+0·002	+0·0158	+0·054
392	860	V. 268	1883	58 Orionis .....α	Var.	81·84	44	5 48 56·733	+ 3·2455	+0·003	+0·0008	+0·003
393	859	V. 269	1895	34 Anrigæ .....β	2·1	...	...	5 51 (6)	+ 4·4053	+0·004	—0·0065	...
394*	866	V. 281	1901	16 Leporis .....η	3·7	82·17	13	5 51 10·017	+ 2·7346	+0·002	—0·0044	—0·012
395	...	...	...	.....	9†	83·17	1	5 51 12·890	+ 2·7233	+0·002	...	...
396	2296	...	1960	Lacaille 2296	6·1	81·80	29	5 52 29·745	—11·7216	+0·102	...	...
397*	...	...	...	Lalande 11382.....	4·7	81·61	12	5 54 18·141	+ 3·0005	+0·002	—0·0017	—0·006
398†	2099	V. 315	1933	Columbæ .....η	4·0	84·16	4	5 55 37·668	+ 1·8336	+0·003	...	...
399	...	...	...	Lalande 11503.....	8·0*	83·13	2	5 57 21·420	+ 2·5234	+0·002	...	...
400†	2210	...	1969	Mensæ .....κ	5·5	82·09	11	5 58 2·823	— 4·0575	+0·010	...	...
401	...	...	...	B.D. — 19° No. 1335	9·5*	83·15	2	5 58 20·490	+ 2·6121	+0·002	...	...
402*	885	V. 322	1945	66 Orionis.....	5·7	81·53	20	5 58 53·788	+ 3·1697	+0·002	—0·0026	—0·009
403	...	...	...	B.D. — 19° No. 1341	8·8*	83·13	3	5 59 29·920	+ 2·6049	+0·002	...	...
404	...	...	...	A G.C. 7224	9½	83·12	3	5 59 48·530	+ 2·6055	+0·002	...	...
405	...	...	...	B.D. — 19° No. 1345	8·3*	83·14	2	5 59 50·140	+ 2·5994	+0·002	...	...
406	2124	...	...	Lacaille 2124	5·8	83·05	4	6 0 3·640	+ 2·2314	+0·002	...	...
407	887	V. 332	1958	67 Orionis .....ν	4·4	84·00	3	6 1 0·420	+ 3·4252	+0·002	—0·0003	0·000
408	...	...	...	B.D. — 19° No. 1349	9·3*	83·12	2	6 1 2·760	+ 2·5876	+0·002	...	...
409	2128	V. 342	1965	Lacaille 2128	5·4	81·35	8	6 1 44·385	+ 2·5022	+0·002	...	...
410	898	V. 349	1973	19 Leporis.....	5·5	84·14	5	6 2 41·578	+ 2·6081	+0·002	—0·0015	—0·001
411	2148	...	...	Lacaille 2148	7·0	83·05	4	6 3 0·560	+ 1·9018	+0·002	...	...
412	...	...	...	Lalande 11775.....	8·0*	83·11	3	6 4 50·620	+ 2·5731	+0·002	...	...
413	...	...	1994	Lalande 11805.....	5·0	81·35	8	6 6 16·015	+ 2·9195	+0·002	...	...
414	2178	...	1996	Lacaille 2178	6·9	83·04	4	6 6 25·240	+ 2·1438	+0·002	...	...
415	909	VI. 22	2002	7 Geminorum .....η	Var.	82·00	18	6 7 56·208	+ 3·6270	+0·001	—0·0050	—0·015
416*	920	VI. 35	2015	5 Monocerotis.....	4·0	82·05	19	6 9 14·813	+ 2·9263	+0·002	—0·0010	—0·003
417	...	...	...	Cape (1880) 2901.....	7½	81·62	12	6 9 57·020	—43·5227	—1·305	...	...
418	2512	...	2085	Lacaille 2512	6·8	82·40	6	6 10 6·285	—15·6922	—0·198	...	...
419	2206	...	2027	Lacaille 2206	7½	83·04	4	6 11 31·460	+ 2·3092	+0·002	...	...
420*	927	VI. 56	2030	6 Monocerotis.....	6·5	81·51	15	6 12 10·786	+ 2·8205	+0·001	—0·0039	—0·014

390. B.A.C. gives no letter.
398. B.A.C. assigns this star to Puppis.

391. Fundamental Star for Southern Zones.
400. B.A.C. gives no letter.

No.	Mean Date. 1800+	No. of Obs.	Mean Dec. 1885·0.	Annual Precession. 1885·0.	Secular Variation. 1885·0.	Annual Proper Motion. μ_δ.	Corr. for μ_δ to 1885·0.	Fallows and Henderson.	Johnson.	Cape Catalogues. 1840.	1850.	1860.	1880.	A.G.C. 1875.	Melbourne, 1870 and 1880.
			° ′ ″	″	″	″	″								
386	81·93	15	− 9 42 40·79	+ 1·547	− 0·42	+ 0·004	+0·01	117*	137	...	884	...	2601	6788	*325*
387	81·91	5	+ 9 50 5·48	+ 1·425	− 0·48	...	...	...	...	...	...	...	...	...	...
388	...	...	− 33 28 (9)	+ 1·387	− 0·32	+ 0·06*	...	...	...	...	888	...	2622	6835	...
389	84·17	1	− 51 6 29·94	+ 1·349	− 0·21	+ 0·10*	+0·08	...	...	607	890	210	2628	6848	...
390*	82·17	15	− 80 33 17·58	+ 1·195	+ 0·72	+ 0·93*	+2·63	...	...	622	907	219	2653	6907	278*
391*	82·43	13	− 20 53 20·38	+ 1·191	− 0·38	− 0·654	−1·68	...	138	...	896	...	2646	6884	*330*
392*	82·85	33	+ 7 23 4·53	+ 0·966	− 0·47	+ 0·024	+0·05	120*	...	611	899	216	2672	...	280*
393	82·92	12	+ 44 56 5·69	+ 0·779	− 0·64	− 0·011	−0·02	...	...	618	...	...	2694	...	*333*
394	82·68	14	− 14 11 22·35	+ 0·773	− 0·40	+ 0·146	+0·34	...	141	...	908	...	2696	6992	*334*
395*	83·17	1	− 14 38 46·67	+ 0·768	− 0·40	...	...	...	...	...	...	...	...	...	...
396	82·53	16	− 84 50 19·89	+ 0·659	+ 1·71	...	...	...	...	...	937	...	2724	7097	*336*
397	81·88	4	− 3 4 46·12	+ 0·499	− 0·44	− 0·078	−0·24	...	...	...	...	...	...	7089	*337*
398*	84·16	4	− 42 49 18·87	+ 0·383	− 0·27	...	...	...	144	635	926	223	2735	7120	287
399	83·13	2	− 18 33 58·88	+ 0·230	− 0·38	...	...	...	...	...	...	...	...	...	...
400*	82·28	10	− 79 22 47·96	+ 0·171	+ 0·59	...	...	...	...	650	945	...	2758	7209	288
401	83·15	2	− 18 59 55·00	+ 0·144	− 0·38	...	...	...	...	...	...	...	...	...	...
402	81·85	16	+ 4 9 50·98	+ 0·096	− 0·46	− 0·013	−0·04	...	...	...	...	...	...	...	*341*
403	83·13	3	− 19 16 22·58	+ 0·044	− 0·38	...	...	...	...	...	...	...	...	...	...
404	83·12	3	− 19 15 6·79	+ 0·016	− 0·38	...	...	...	...	...	...	...	...	7224	...
405	83·14	2	− 19 29 1·74	+ 0·015	− 0·38	...	...	...	...	...	...	...	...	...	...
406	...	...	− 32 10 (14)	− 0·005	− 0·33	...	...	...	...	...	...	...	2772	7234	...
407	84·00	3	+ 14 46 51·78	− 0·088	− 0·50	− 0·013	−0·01	...	...	...	936	224	2779	...	289*
408	83·12	2	− 19 55 53·32	− 0·090	− 0·38	...	...	...	...	...	...	...	...	...	...
409	81·09	6	− 23 5 54·09	− 0·152	− 0·36	...	...	...	...	644	941	...	2794	7286	...
410	84·14	5	− 19 9 11·09	− 0·235	− 0·38	+ 0·094	+0·08	...	...	...	947	...	2801	7314	...
411	...	...	− 41 12 (23)	− 0·264	− 0·28	...	...	...	...	...	...	...	2806	7327	...
412	83·11	3	− 20 28 59·30	− 0·423	− 0·37	...	...	...	...	...	...	...	...	...	...
413	81·10	6	− 6 31 30·12	− 0·548	− 0·43	...	...	...	...	...	958	...	2838	7408	...
414	...	...	− 34 47 (37)	− 0·561	− 0·31	...	...	...	...	...	960	...	2839	7414	...
415*	82·21	19	+ 22 32 20·92	− 0·694	− 0·53	− 0·003	−0·01	...	...	662	964	229	2853	...	*345*
416	82·71	18	− 6 14 25·32	− 0·809	− 0·42	− 0·033	−0·08	125	147	...	968	...	2868	7495	*348*
417	81·86	12	− 88 21 29·10	− 0·870	+ 6·34	...	...	...	...	...	...	...	2901	...	...
418	82·67	5	− 85 55 42·14	− 0·884	+ 2·29	...	...	...	...	702	1008	235	2881	7601	301*
419	...	...	− 29 45 (1)	− 1·007	− 0·34	...	...	...	...	...	970	...	2880	7561	...
420	82·05	14	− 10 41 0·40	− 1·065	− 0·41	− 0·012	−0·04	...	...	...	971	...	2887	7572	*350*

392. Limits of magnitude 1–1·4 : Period 196^d (Argelander), Schönfeld thinks periodicity questionable.
395. Magnitude from Cape Observations.
415. Limits of magnitude 3·2–3·7 to 4·2 : Period 229^d·1.

No.	Bradley or Lacaille.	Piazzi.	B.A.C.	Star's Name.	Mag.	Mean Date. 1800+	No. of Obs.	Mean R.A. 1885·0.	Annual Precession. 1885·0.	Secular Variation. 1885·0.	Annual Proper Motion. μ_α.	Corr. for μ_α to 1885·0.
								h m s	s	s	s	s
421	...	...	...	B.D. − 22° No. 1374	9·4*	83·10	4	6 14 0·690	+2·5112	+0·002	. .	...
422	928	VI. 69	2040	7 Monocerotis.....	5·1	81·62	17	6 14 10·441	+2·8902	+0·001	−0·0001	0·000
423	...	...	...	A.G.C. 7663	8½	83·09	2	6 15 17·590	+2·5046	+0·002	...	...
424†	933*	VI. 81	2051	1 Canis Majoris .....ζ	3·2	82·06	17	6 15 53·875	+2·3020	+0·002	−0·0001	0·000
425	929	VI. 74	2047	13 Geminorum .....μ	3·2	83·75	4	6 16 0·200	+3·6267	0·000	+0·0037	+0·005
426	...	...	...	.....	9†	83·11	2	6 17 11·430	+2·4968	+0·002	...	...
427*	936	VI. 92	2061	2 Canis Majoris .....β	2·0	82·30	17	6 17 38·089	+2·6419	+0·002	−0·0015	−0·004
428	931	VI. 84	2059	8 Monocerotis.....	4·4	82·17	30	6 17 40·461	+3·1808	+0·001	−0·0012	−0·003
429	2269	...	...	Lacaille 2269	7·4	82·82	12	6 18 52·397	+1·3293	+0·001	...	...
430	2426	...	...	Lacaille 2426	7¼	81·82	9	6 20 23·817	−6·4086	−0·093	...	...
431	2291	...	2096	Argûs.....α	0·4	82·73	15	6 21 23·911	+1·3293	+0·001	0·000*	0·000
432	...	...	...	Lalande 12358.....	8·5*	81·10	3	6 22 3·960	+3·5650	−0·001	...	...
433*	948	VI. 116	2094	10 Monocerotis.....	5·0	82·24	21	6 22 16·857	+2·9632	+0·001	−0·0011	−0·003
434	...	...	...	A.G.C. 7901	8¼	82·41	12	6 23 33·707	+1·3339	+0·001	...	...
435	958	VI. 143	2126	13 Monocerotis.....	4·3	81·10	6	6 26 41·060	+3·2453	0·000	+0·0003	+0·001
436	2324	VI. 160	2141	Lacaille 2324	6·9	83·06	4	6 27 35·850	+2·0773	+0·002	...	...
437*	972	VI. 170	2160	5 Canis Majoris .....ξ²	4·4	81·97	28	6 30 14·143	+2·5132	+0·001	+0·0018	+0·005
438	2350	VI. 177	2164	Lacaille 2350	7·0	83·06	4	6 30 32·380	+2·1813	+0·002	...	...
439	969	VI. 169	2163	24 Geminorum .....γ	2·0	83·40	5	6 31 4·076	+3·4647	−0·001	+0·0023	+0·004
440	978	VI. 180	2171	7 Canis Majoris .....ν²	4·3	84·16	3	6 31 40·040	+2·6123	+0·001	+0·0028	+0·002
441†	2386	VI. 205	2188	Argûs.....ν	3·5	84·16	2	6 34 14·570	+1·8355	+0·001	...	..
442	981	VI. 193	2185	15 Monocerotis .....(S)	Var.	81·67	58	6 34 38·685	+3·3055	−0·001	−0·0003	−0·001
443	...	VI. 206	2190	Piazzi VI. 206.....	7¼	83·05	3	6 34 44·280	+2·0438	+0·002	...	...
444	...	...	...	Lalande 12861.....	8	82·82	12	6 34 57·890	+2·6636	+0·001	...	...
445*	...	VI. 203	2189	Piazzi VI. 203.....	5·7	82·64	12	6 35 10·685	+3·0863	0·000	−0·0024	−0·006
446	...	...	...	Lalande 12936	7¾	82·43	12	6 36 49·645	+2·6965	+0·001	...	...
447	983	VI. 204	2194	27 Geminorum .....ε	3·2	84·00	6	6 36 51·400	+3·6946	−0·004	−0·0018	−0·002
448	...	...	...	.....	9½†	83·08	5	6 38 35·190	+2·4083	+0·001	...	...
449	989	VI. 217	2206	31 Geminorum .....ξ	3·4	82·67	18	6 38 50·132	+3·3771	−0·002	−0·0087	−0·020
450	2417	...	...	Lacaille 2417	7·1	83·06	4	6 39 12·540	+2·4463	+0·001	...	...
451	2420	...	...	Lacaille 2420	7¼	83·03	1	6 39 19·010	+2·3873	+0·001	...	...
452*	994	VI. 227	2213	9 Canis Majoris .....α	−1·4	81·83	24	6 40 4·849	+2·6810	0·000	−0·0372	−0·118
453*	995	VI. 234	2222	18 Monocerotis..... ..	4·8	81·82	28	6 41 51·858	+3·1306	−0·001	−0·002	−0·006
454	...	...	...	Lalande 13129.....	8	82·18	12	6 42 30·350	+2·6610	+0·001	...	...
455	...	...	...	A.G.C. 8460.....	9¼	83·09	2	6 43 38·530	+2·4052	+0·001	...	...

437. Fundamental Star for Southern Zones.

No.	Mean Date. 1800+	No. of Obs.	Mean Dec. 1885·0.	Annual Precession. 1885·0.	Secular Variation. 1885·0.	Annual Proper Motion. μ_δ.	Corr. for μ_δ to 1885·0.	Fallows and Henderson.	Johnson.	Cape Catalogues. 1840.	1850.	1860.	1880.	A.G.C. 1875.	Melbourne, 1870 and 1880.
			° ′ ″	″	″	″	″								
421	83·10	4	— 22 48 32·32	— 1·226	— 0·36	...	...	...	...	...	...	...	...	...	...
422	81·41	12	— 7 46 32·29	— 1·239	— 0·42	+ 0·009	+ 0·03	...	...	...	982	...	2905	7628	...
423	83·09	2	— 23 3 21·44	— 1·339	— 0·36	...	...	...	...	...	...	...	...	7663	...
424	82·51	16	— 30 0 46·60	— 1·390	— 0·33	+ 0·012	+0·03	126*	149	680	988	234	2924	7681	...
425	84·00	3	+ 22 34 18·23	— 1·399	— 0·53	— 0·101	—0·10	*153*	...	677	983	233	2923	...	302*
426*	83·11	2	— 23 21 9·68	— 1·502	— 0·36	...	...	...	...	...	...	...	...	...	...
427	82·80	16	— 17 53 58·74	— 1·541	— 0·38	+ 0·003	+0·01	127*	150	686	994	...	2940	7719	*354*
428	82·28	18	+ 4 39 1·20	— 1·544	— 0·46	+ 0·010	+0·03	...	...	...	...	...	...	...	...
429	83·00	12	— 52 36 20·99	— 1·649	— 0·19	...	...	...	...	...	..	...	2956	7764	...
430	82·14	10	— 82 0 17·84	— 1·783	+ 0·93	...	...	...	...	...	...	...	2985	7845	...
431	82·67	15	— 52 37 59·44	— 1·869	— 0·19	0·00*	0·00	128*	152	697	1016	238	2992	7843	304*
432	81·10	3	+ 20 18 39·38	— 1·928	— 0·52	...	...	...	...	...	...	...	...	...	...
433	82·67	21	— 4 41 31·10	— 1·946	— 0·43	+ 0·014	+0·03	...	...	...	1015	...	2997	7856	*359*
434	82·34	11	— 52 35 4·81	— 2·057	— 0·19	...	...	...	...	...	...	...	3012	7901	...
435	81·10	6	+ 7 24 58·32	— 2·330	— 0·47	+ 0·004	+0·02	...	...	...	...	...	3033	...	...
436	...	...	— 36 51 (35)	— 2·409	— 0·30	...	...	...	...	717	1042	...	3051	8004	*368*
437*	82·56	20	— 22 52 27·56	— 2·638	— 0·36	+ 0·031	+0·08	...	154	727	1052	...	3076	8065	*366*
438	...	...	— 33 55 (10)	— 2·664	— 0·31	...	...	...	...	730	1055	...	3082	8077	...
439	84·00	5	+ 16 29 46·64	— 2·710	— 0·50	— 0·035	—0·04	130	...	...	1054	243	3087	...	313*
440	84·16	3	— 19 9 29·99	— 2·762	— 0·38	— 0·041	—0·03	...	155	...	1062	. .	3094	8101	...
441	84·16	2	— 43 5 44·08	— 2·984	— 0·26	...	...	132*	156	742	1072	246	3124	8181	314
442*	81·89	26	+ 10 0 3·83	— 3·020	— 0·48	0·000	0·00	...	...	...	...	...	...	...	...
443	...	...	— 37 53 (35)	— 3·028	— 0·29	...	...	...	...	...	1073	...	3129	8197	...
444	82·82	12	— 17 11 21·33	— 3·048	— 0·38	...	...	...	...	...	...	...	...	8201	...
445	82·64	12	+ 0 36 5·78	— 3·065	— 0·44	+ 0·006	+0·01	...	...	...	...	...	...	...	*369*
446*	82·43	12	— 15 53 51·71	— 3·209	— 0·39	...	...	...	...	...	...	...	...	8261	...
447	84·00	6	+ 25 14 38·28	— 3·210	— 0·53	— 0·005	—0·01	...	...	743	1075	247	...	...	...
448*	83·08	5	— 26 44 28·72	— 3·360	— 0·35	...	...	...	...	...	...	...	...	...	...
449	83·00	12	+ 13 1 7·86	— 3·382	— 0·48	— 0·195	—0·39	...	...	...	...	...	3165	...	*373*
450	...	...	+ 25 25 (11)	— 3·414	— 0·35	...	...	...	...	...	...	...	3171	8327	...
451	83·03	1	— 27 28 34·40	— 3·424	— 0·34	...	...	...	...	...	...	...	3172	8329	...
452*	82·67	27	— 16 33 32·09	— 3·489	+ 0·38	— 1·199	—2·79	133*	157	755	1085	249	3176	8348	316*
453	82·55	20	+ 2 32 13·69	— 3·643	— 0·45	— 0·012	—0·03	...	...	...	...	...	3194	...	*375*
454	82·18	11	— 17 23 1 12	— 3·697	— 0·38	...	...	...	...	...	...	...	...	8425	...
455	83·09	2	— 26 56 32·41	— 3·795	— 0·34	...	...	...	...	...	...	...	...	8460	...

426. Magnitude from Cape Observations.
446. Companion 9½ *s.f.*
452. Reductions to centre of gravity of the system—Auwers, *Ast. Nach.* 3085 : $\Delta\alpha = +0^s\cdot146$. $\Delta\delta = +2''\cdot25$.

442. Limits of magnitude 4·9–5 4 : Period doubtful.
448. Magnitude from Cape Observations.

No.	Bradley or Lacaille.	Piazzi.	B.A.C.	Star's Name.	Mag.	Mean Date. 1800+	No. of Obs.	Mean R.A. 1885·0.	Annual Precession. 1885·0.	Secular Variation. 1885·0.	Annual Proper Motion. μ_α.	Corr. for μ_α to 1885·0.
								h m s	s	s	s	s
456	2490	...	2250	Lacaille 2490	6·3	83·17	10	6 45 4·180	+1·1709	−0·002	...	...
457	1003	VI. 248	2237	34 Geminorum .....θ	3·7	82·40	10	6 45 12·519	+3·9600	−0·007	−0·0002	−0·001
458	...	...	...	A.G.C. 8507	8½	82·16	12	6 45 13·590	+2·6990	+0·001	...	...
459†	1008*	VI. 259	2246	13 Canis Majoris .....κ	4·0	84·31	6	6 45 32·730	+2·2414	+0·001	−0·0032	−0·002
460†	2525	...	2260	Pictoris .....α	3·5	84·15	1	6 47 0·440	+0·6295	−0·006	−0·010*	−0·009
461†	2505	...	2256	Argûs .....τ	3·2	84·17	4	6 47 5·010	+1·4860	0·000	...	...
462	2523	...	...	Lacaille 2523	7¾	83·17	5	6 47 50·350	+1·1502	−0·002	...	...
463*	1011	VI. 274	2264	14 Canis Majoris .....θ	4·2	81·57	21	6 48 50·878	+2·7972	0·000	−0·0105	−0·036
464	...	...	...	A.G.C. 8633	8¼	83·10	3	6 49 26·810	+2·3892	+0·001	...	...
465†	2648	...	2290	Mensæ ....ζ	5·8	82·16	18	6 49 36·009	−4·8933	−0·161	...	...
466	2542	...	...	Lacaille 2542	8¼	83·13	5	6 50 5·480	+1·1106	−0·003	...	...
467*	1018	VI. 287	2272	19 Canis Majoris	4·5	81·29	12	6 50 38·193	+2·5979	+0·001	+0·0023	+0·009
468	...	...	...	.....	9†	83·05	3	6 51 48·910	+2·3828	+0·001	...	...
469	2574	...	...	Lacaille 2574	8·0	83·16	5	6 53 48·890	+1·0846	−0·003	...	...
470*	...	VI. 303	2291	Piazzi VI. 303	5·4	81·76	15	6 53 53·169	+2·4589	+0·001	−0·0002	−0·001
471†	1023*	VI. 304	2293	21 Canis Majoris .....ε	1·5	82·81	21	6 54 6·349	+2·3573	+0·001	−0·0011	−0·002
472	2585	...	...	Lacaille 2585	7½	83·13	5	6 54 23·510	+1·0391	−0·004	...	...
473	...	...	...	Lalande 13554	7·5*	81·69	2	6 55 16·650	+3·6924	−0·006	...	...
474	...	...	...	Lalande 13581.....	5·9	84·98	2	6 55 43·130	+3·4322	−0·004	...	...
475	2566	...	...	Lacaille 2566	6·9	83·07	3	6 55 45·740	+2·2934	+0·001	...	...
476	...	...	...	W.B. VI. 1648.....	8·3*	83·12	1	6 56 24·310	+3·6910	−0·006	...	...
477	1027*	VI. 320	2309	22 Canis Majoris	3·5	83·58	4	6 57 8·235	+2·3902	+0·001	−0·0023	−0·003
478*	1026	VI. 315	2307	19 Monocerotis.....	4·8	81·36	16	6 57 12·232	+2·9801	−0·001	−0·0014	−0·005
479	1024	VI. 312	2305	43 Geminorum .....ζ	Var.	84·00	1	6 57 17·390	+3·5629	−0·005	−0·0011	−0·001
480	...	...	...	A.G.C. 8862	9·0	83·05	3	6 57 38·970	+2·3700	+0·001	...	...
481	1029*	VI. 323	2318	24 Canis Majoris .....o^2	3·1	84·17	8	6 58 13·360	+2·5053	+0·001	−0·0016	−0·001
482*	1028	VI. 325	2319	23 Canis Majoris .....γ	4·1	81·73	15	6 58 33·344	+2·7145	0·000	−0·0018	−0·006
483	2613	...	...	Lacaille 2613	8¼	83·16	5	6 58 41·800	+0·9842	−0·005	...	...
484	2600	VI. 327	2324	Lacaille 2600	6·8	83·07	3	6 58 41·910	+1·8563	+0·001	...	...
485	2621	...	2325	Lacaille 2621	6·4	83·15	10	6 59 18·120	+0·9402	−0·005	...	...
486	...	...	...	Lalande 13811.....	5·1	81·52	7	7 1 16·703	+2·8190	0·000	...	...
487	1030	VI. 333	2330	45 Geminorum	5·6	83·11	3	7 1 46·330	+3·4447	−0·004	−0·0016	−0·003
488	2625	...	2335	Lacaille 2625	6·5	83·07	3	7 2 5·350	+2·0585	+0·001	...	...
489	...	...	...	B.D. + 15° No. 1482	8·1*	85·02	2	7 2 31·880	+3·4321	−0·004	...	...
490†	1042*	VII. 2	2345	25 Canis Majoris .....δ	1·9	82·66	20	7 3 42·894	+2·4396	+0·001	−0·0015	−0·004

456. O Carinæ in B.A.C.
470. Fundamental Star for Southern Zones. Referred to in A.G.C. as Lacaille 2538, but A.G.C. 8704 seems to be 2538.
477. σ Canis Majoris in A.G.C.

No.	Mean Date. 1800+	No. of Obs.	Mean Dec. 1885·0.	Annual Precession. 1885·0.	Secular Variation. 1885·0.	Annual Proper Motion. μ_δ.	Corr. for μ_δ to 1885·0.	Fallows and Henderson.	Johnson.	Cape Catalogues. 1840.	1850.	1860.	1880.	A.G.C. 1875.	Melbourne, 1870 and 1880.
			° ′ ″	″	″	″	″								
456*	83·17	10	— 55 24 45·12	— 3·918	— 0·17	...	...	...	...	768	1107	...	3229	8511	...
457	82·36	11	+ 34 5 55·70	— 3·931	— 0·56	— 0·032	—0·08	...	...	...	...	...	...	...	...
458	82·16	12	— 15 53 51·66	— 3·932	— 0·38	...	...	...	...	...	...	...	...	8507	...
459	84·31	6	— 32 22 34·41	— 3·959	— 0·32	+ 0·053	+0·04	135	158	767	1106	252	3234	8518	320
460	84·15	1	— 61 49 4·64	— 4·085	— 0·09	+ 0·18*	+0·15	...	161	778	1114	254	3253	8570	322
461	84·17	4	— 50 28 40·39	— 4·092	— 0·21	...	...	...	159	774	1111	...	3252	8568	321
462	83·17	5	— 55 46 4·10	— 4·155	— 0·16	...	...	...	...	...	...	...	3262	8588	...
463	82·37	19	— 11 53 43·11	— 4·242	— 0·40	— 0·003	—0·01	...	160	...	1116	...	3270	8614	*379*
464	83·10	3	— 27 37 2·27	— 4·293	— 0·34	...	...	...	...	...	...	...	...	8633	...
465	82·52	15	— 80 41 26·89	— 4·306	+ 0·70	...	...	...	...	790	1133	257	·3290	8667	323*
466	83·13	4	— 56 21 54·43	— 4·348	— 0·16	...	...	...	...	...	...	...	3289	8653	...
467	82·07	12	— 19 59 26·27	— 4·394	— 0·37	+ 0·035	+0·10	...	...	...	1121	...	3292	8658	*381*
468*	83·05	3	— 27 53 21·58	— 4·495	— 0·34	...	...	...	...	...	...	...	...	...	...
469	83·16	5	— 56 48 37·94	— 4·666	— 0·15	...	...	...	...	...	...	...	3325	8749	...
470*	82·02	13	— 25 15 31·21	— 4·672	— 0·35	+ 0·035	+0·10	...	...	...	1134	...	3324	8747	*384*
471	83·28	32	— 28 48 58·29	— 4·689	— 0·33	+ 0·017	+0·03	138*	164	787	1135	258	3331	8752	324*
472	83·13	5	— 57 25 3·82	— 4·714	— 0·15	...	...	...	...	...	...	...	...	8765	...
473	81·94	4	+ 25 31 43·19	— 4·790	— 0·52	...	...	...	...	...	...	...	...	...	...
474	84·98	2	+ 15 29 59·14	— 4·827	— 0·48	...	...	...	...	...	...	...	...	...	...
475	...	...	— 30 58 (58)	— 4·832	— 0·32	...	...	...	...	...	...	...	3351	8798	...
476	83·12	1	+ 25 30 12·40	— 4·884	— 0·52	...	...	...	...	...	...	...	...	...	...
477*	83·22	5	— 27 46 14·23	— 4·948	— 0·34	— 0·012	—0·02	139	165	795	1146	...	3370	8839	...
478	81·97	12	— 4 4 23·93	— 4·953	— 0·42	+ 0·028	+0·08	...	...	...	1144	...	3372	8838	*388'*
479*	84·00	1	+ 20 44 16·63	— 4·960	— 0·50	+ 0·001	0·00	...	...	...	1143	260	...	...	...
480	83·05	3	— 28 28 40·55	— 4·991	— 0·33	...	...	...	...	...	...	...	...	8862	...
481	84·17	8	— 23 39 57·02	— 5·039	— 0·35	+ 0·018	+0·01	...	166	798	1151	...	3383	8873	...
482	82·00	15	— 15 27 50·81	— 5·068	— 0·38	— 0·003	—0·01	140	167	...	1152	262	3385	8880	327*
483	83·16	5	— 58 13 43·35	— 5·080	— 0·14	...	...	...	...	...	...	...	3389	8892	...
484	...	...	— 43 14 (11)	— 5·080	— 0·26	...	...	...	...	800	1154	...	3386	8889	...
485	83·15	10	— 58 46 41·71	— 5·131	— 0·13	...	...	...	...	801	1155	...	3394	8907	...
486.	81·15	4	— 11 7 3·65	— 5·299	— 0·39	...	...	...	...	...	...	...	...	8957	...
487	83·11	3	+ 16 6 48·03	— 5·339	— 0·48	— 0·104	—0·20	...	...	...	...	...	...	...	...
488	...	...	— 38 12 (23)	— 5·366	— 0·29	...	...	...	...	...	1161	...	3423	8980	...
489	85·02	2	+ 15 36 43·97	— 5·404	— 0·48	...	...	...	...	...	...	...	...	...	...
490	82·79	22	— 26 12 40·14	— 5·503	— 0·34	+ 0·007	+0·02	143	168	817	1167	265	3438	9021	*393*

468. Magnitude from Cape Observations.

479. Limits of magnitude 3·7–4·5 : Period $10^h.\ 3^m.\ 41^s.5$.

No.	Bradley or Lacaille.	Piazzi.	B.A.C.	Star's Name.	Mag.	Mean Date. 1800+	No. of Obs.	Mean R.A. 1885·0.	Annual Precession. 1885·0.	Secular Variation. 1885·0.	Annual Proper Motion. μ_α	Corr. for μ_α to 1885·0.
								h m s	s	s	s	s
491	1032	VI. 338	2338	63 Aurigæ.....	5·2	82·82	16	7 3 44·653	+ 4·1324	—0·013	+0·0030	+0·006
492*	1041	VII. 4	2348	20 Monocerotis.....	5·1	81·31	15	7 4 30·971	+ 2·9813	—0·001	—0·0003	—0·001
493	1036	VI. 346	2347	Bradley 1036	7·3*	85·03	2	7 4 42·770	+ 3·4290	—0·005	+0·0027	0·000
494	2647	...	...	Lacaille 2647	5·4	83·07	3	7 5 42·120	+ 2·4104	+0·001	...	...
495	1053*	VII. 31	2368	26 Canis Majoris	6·5	81·64	6	7 7 29·885	+ 2·4553	+0·001	—0·0013	—0·004
496	2746	...	2400	Volantis .....γ^2	4·5	84·17	8	7 9 43·195	— 0·4924	—0·033	...	...
497	1058	VII. 50	2398	54 Geminorum .....λ	3·6	81·94	71	7 11 29·037	+ 3·4553	—0·006	—0·0039	—0·012
498	2697	VII. 59	2405	Lacaille 2697	4·9	81·80	6	7 11 58·333	+ 2·4054	+0·001	...	...
499†	2720	VII. 68	2414	Argûs.....π	2·7	84·21	4	7 13 4·870	+ 2·1195	+0·001	...	...
500	1062	VII. 57	2410	55 Geminorum .....δ	3·7	84·00	7	7 13 15·340	+ 3·5902	—0·007	—0·0025	—0·003
501	...	...	...	W.B. (2) VII. 358 ...	6·8*	84·98	2	7 13 33·850	+ 3·4207	—0·005	...	...
502*	1067*	VII. 71	2417	29 Canis Majoris	4·8	82·42	12	7 13 53·123	+ 2·4986	+0·001	—0·0008	—0·002
503	1069*	VII. 72	2418	30 Canis Majoris	4·3	81·85	14	7 13 56·366	+ 2·4881	+0·001	—0·0018	—0·006
504	...	VII. 81	2433	Piazzi VII. 81.....	7·0*	81·54	15	7 16 9·390	+ 3·0811	—0·002	...	...
505*	...	VII. 85	...	Piazzi VII. 85.....	6·2	81·47	13	7 16 31·150	+ 2·8777	—0·001	—0·0005	—0·002
506	1072	VII. 90	2442	60 Geminorum .....ι	4·0	82·29	18	7 18 35·014	+ 3·7426	—0·010	—0·0097	—0·026
507	1075	VII. 94	2451	2 Canis Minoris .....ε	5·0	81·52	13	7 19 21·751	+ 3·2829	—0·004	—0·0024	—0·008
508†	1081*	VII. 104	2458	31 Canis Majoris .....η	2·4	84·17	4	7 19 32·850	+ 2·3733	+0·001	—0·0020	—0·002
509	1079	VII. 106	2462	3 Canis Minoris .....β	3·1	84·00	13	7 20 54·838	+ 3·2603	—0·004	—0·0042	—0·004
510	2802	VII. 113	2466	Lacaille 2802	7·0	83·10	3	7 21 18·090	+ 2·3038	+0·001	...	...
511	1078	VII. 105	2464	62 Geminorum .....ρ	4·2	84·00	1	7 21 42·750	+ 3·8556	—0·012	+0·0093	+0·009
512*	...	VII. 116	2470	Piazzi VII. 116	5·8	81·25	19	7 22 27·261	+ 2·8218	0·000	—0·0103	—0·039
513	2832	VII. 130	2479	Puppis .....y	5·9	83·10	3	7 25 6·850	+ 2·0788	+0·001	...	...
514	2837	VII. 135	2482	Argûs .....σ	3·5	84·16	7	7 25 34·959	+ 1·9088	+0·001	—0·011*	—0·009
515	1088	VII. 126	2480	7 Canis Minoris .....δ^1	5·1	81·11	6	7 26 7·520	+ 3·1193	—0·003	—0·0024	—0·009
516	3274	...	...	Lacaille 3274	6·7	82·35	36	7 26 55·890	—19·4202	—2·727	...	...
517	1091	VII. 131	2486	68 Geminorum.....	5·0	83·11	2	7 27 2·710	+ 3·4302	—0·007	—0·0023	—0·004
518	1087	VII. 128	2485	66 Geminor. (2nd star) a	1·7*	84·00	5	7 27 15·660	+ 3·8522	—0·013	—0·0151	—0·015
519	...	...	...	B.D. + 15° No. 1601	8·8*	84·98	2	7 27 16·780	+ 3·4069	—0·006	...	...
520*	...	...	...	Lalande 14810.....	4·5	81·77	13	7 29 7·813	+ 2·5714	+0·001	—0·0034	—0·011
521	2855	VII. 148	...	Lacaille 2855	7½	83·10	3	7 29 15·880	+ 2·4059	+0·001	...	...
522	2849	VII. 147	2497	Puppis (1st star) n	6¾	82·11	12	7 29 27·042	+ 2·5419	+0·001	...	...
523*	1102	VII. 162	2513	25 Monocerotis.....	5·1	82·82	20	7 31 33·634	+ 2·9894	—0·002	—0·0060	—0·013
524	...	...	...	A.G.C. 9852	7½	83·10	3	7 33 13·280	+ 2·1751	+0·001	...	...
525*	1106	VII. 168	2522	10 Canis Minoris .....a	0·5	81·95	48	7 33 16·988	+ 3·1911	—0·004	—0·0474	—0·145

502. Fundamental Star for Southern Zones. 503. τ Canis Majoris in A.G.C. 520. Fundamental Star for Southern Zones.

No.	Mean Date. 1800+	No. of Obs.	Mean Dec. 1885·0.	Annual Precession. 1885·0.	Secular Variation. 1885·0.	Annual Proper Motion. μ_{δ}.	Corr. for μ_{δ} to 1885·0.	Fallows and Henderson.	Johnson.	Cape Catalogues. 1840.	1850.	1860.	1880.	A.G.C. 1875.	Melbourne, 1870 and 1880.
			° ′ ″	″	″	″	″								
491	82·56	19	+ 39 30 25·76	— 5·507	— 0·58	+ 0·020	+0·05	...	...	...	...	...	...	...	*392*
492	81·82	12	— 4 3 31·07	— 5·571	— 0·42	+ 0·207	+0·66	...	...	...	1168	...	3446	9044	*394*
493	85·03	2	+ 15 31 14·87	— 5·588	— 0·48	— 0·01	0·00	...	...	...	...	..	...	...	...
494	...	...	— 27 18 (15)	— 5·670	— 0·34	...	...	...	...	...	...	...	3460	9080	...
495	81·17	3	— 25 45 2·16	— 5·821	— 0·34	+ 0·010	+0·04	...	...	...	1179	...	3476	9123	...
496	84·17	8	— 70 18 41·80	— 6·006	+ 0·07	...	...	...	174	840	1199	...	3503	9206	335
497	82·25	30	+ 16 44 48·98	— 6·154	— 0·48	— 0·026	—0·07	...	...	...	...	...	...	...	...
498	81·46	3	— 27 40 42·69	— 6·194	— 0·33	...	...	...	...	843	1204	...	3534	9255	...
499	84·21	4	— 36 53 29·35	— 6·287	— 0·29	...	...	145*	175	850	1210	272	3550	9288	338
500	83·88	8	+ 22 11 35·55	— 6·301	— 0·50	+ 0·003	0·00	*152*	...	846	1207	271	3551	...	337*
501	84·98	2	+ 15 21 14·68	— 6·327	— 0·47	...	...	...	...	...	...	...	...	...	...
502*	82·42	12	— 24 20 58·17	— 6·353	— 0·34	+ 0·012	+0·03	...	...	852	1212	...	3560	9311	*402*
503*	82·13	12	— 24 44 42·22	— 6·358	— 0·34	+ 0·031	+0·09	...	...	...	1213	...	3562	9313	...
504	81·16	6	+ 0 23 37·19	— 6·541	— 0·42	...	...	...	...	...	...	...	...	...	...
505	81·88	12	— 8 45 45·61	— 6·571	— 0·39	+ 0·016	+0·05	...	...	...	...	...	3588	9382	*403*
506	82·41	17	+ 28 1 32·48	— 6·742	— 0·51	— 0·075	—0·19	...	...	862	...	275	...	...	*407*
507	81·09	3	+ 9 30 7·80	— 6·807	— 0·45	— 0·006	—0·02	...	...	866	...	...	...	...	...
508	84·17	4	— 29 4 45·76	— 6·822	— 0·32	+ 0·014	+0·01	146*	177	869	1236	276	3627	9476	347*
509	84·00	12	+ 8 31 12·72	— 6·934	— 0·44	— 0·030	—0·03	...	...	...	...	...	3642	...	*409*
510	...	...	— 31 30 (39)	— 6·965	— 0·31	...	...	...	...	872	1239	...	3645	9540	...
511	84·00	1	+ 32 0 43·64	— 7·000	— 0·52	+ 0·194	+0·19	...	...	...	...	...	...	...	...
512	81·48	12	— 11 19 27·47	— 7·060	— 0·38	+ 0·014	+0·05	...	...	...	1240	...	3653	9561	*411*
513	...	...	— 38 34 (29)	— 7·278	— 0·28	...	...	...	...	882	1248	...	3681	9637	...
514	84·16	7	— 43 4 8·56	— 7·316	— 0·26	+ 0·18*	+0·15	147	178	883	1250	278	3683	9652	351
515	81·11	6	+ 2 9 26·34	— 7·359	— 0·42	+ 0·023	+0·09	...	...	...	...	...	...	...	...
516	82·85	22	— 86 50 22·98	— 7·427	+ 2·63	...	...	...	...	...	...	...	3713	9770	356*
517	83·11	2	+ 16 4 21·86	— 7·434	— 0·46	— 0·005	—0·01	...	...	...	1254	...	...	...	...
518	84·00	5	+ 32 8 23·14	— 7·451	— 0·52	— 0·079	—0·08	*163*	...	885	1253	280	3696	...	353*
519	84·98	2	+ 15 5 3·46	— 7·454	— 0·46	...	...	...	...	...	...	...	...	...	...
520*	82·09	12	— 22 2 53·83	— 7·604	— 0·34	+ 0·041	+0·12	...	...	...	...	...	...	9733	*417*
521	...	...	— 28 19 (8)	— 7·615	— 0·32	...	...	...	...	...	...	...	3716	9739	...
522	82·11	12	— 23 13 25·22	— 7·630	— 0·34	...	...	...	...	891	1259	...	3719	9744	...
523	82·68	18	— 3 51 18·16	— 7·801	— 0·40	+ 0·039	+0·09	...	...	...	1267	...	3745	9804	*420*
524	...	...	— 36 9 (31)	— 7·934	— 0·29	...	...	...	...	...	...	..	3761	9852	...
525*	82·95	52	+ 5 31 10·88	— 7·939	— 0·42	— 1·027	—2·11	150*	...	900	1270	282	3760	...	358*

525. Reductions to centre of gravity of the system (Auwers): $\Delta\alpha = +0^{s}\cdot068$. $\Delta\delta = -1''\cdot11$.

No.	Bradley or Lacaille.	Piazzi.	B.A.C.	Star's Name.	Mag.	Mean Date. 1800+	No. of Obs.	Mean R.A. 1885·0.	Annual Precession 1885·0.	Secular Variation. 1885·0.	Annual Proper Motion. μ_a.	Corr. for μ_a to 1885·0.
								h m s	s	s	s	s
526	...	...	...	Lalande 14961.....	5·9	83·11	2	7 35 34·150	+3·3880	−0·007	...	...
527	...	...	...	C.Z. VII. 2515	9½	83·10	2	7 35 39·330	+2·3595	+0·001	...	...
528*	1110	VII. 181	2542	26 Monocerotis.....	4·2	82·40	20	7 35 45·157	+2·8727	−0·001	−0·0077	−0·020
529	1111	VII. 184	2551	77 Geminorum .....κ	3·6	84·00	6	7 37 30·270	+3·6318	−0·011	−0·0034	−0·003
530	1112	VII. 191	2555	78 Geminorum .....β	1·1	82·12	17	7 38 16·847	+3·7272	−0·013	−0·0481	−0·139
531†	1120*	VII. 201	2562	3 Argûs .....τ	4·2	81·55	14	7 39 11·442	+2·4085	+0·001	−0·0012	−0·004
532	1114	VII. 196	2563	80 Geminorum .....π	5·4	84·00	7	7 40 5·440	+3·8802	−0·016	−0·0011	−0·001
533*	1122	VII. 210	2573	4 Puppis	5·2	81·14	12	7 40 39·140	+2·7643	0·000	−0·0007	−0·003
534	2981	VII. 220	2594	Puppis .....o	4·7	81·76	11	7 43 18·346	+2·4944	+0·001	...	...
535	...	...	...	B.D. + 15° No. 1673	8·5*	84·97	2	7 43 28·630	+3·3943	−0·007	...	...
536	...	...	...	Lalande 15246.....	7·3*	83·11	2	7 44 1·980	+3·3973	−0·008	...	...
537†	1132*	VII. 230	2602	7 Argûs .....ξ	3·4	84·00	10	7 44 27·446	+2·5235	+0·001	−0·0011	−0·001
538*	1134	VII. 240	2622	9 Puppis	5·5	81·62	14	7 46 26·809	+2·7834	−0·001	−0·0064	−0·022
539	1128	VII. 233	2617	83 Geminorum .....φ	4·9	84·17	8	7 46 27·510	+3·6831	−0·013	−0·0023	−0·002
540†	3044	VII. 253	2634	Puppis .....a	4·0	84·20	8	7 48 15·800	+2·0635	+0·001	...	...
541	...	VII. 249	2636	Piazzi VII. 249	7·0*	81·26	7	7 49 16·644	+3·2641	−0·006	...	...
542†	3068	...	2644	Lacaille 3068	4·5	84·19	8	7 49 55·395	+1·7641	−0·001	...	...
543*	1141	VII. 266	2652	11 Puppis	4·3	81·24	12	7 51 54·854	+2·5816	+0·001	−0·0044	−0·017
544†	3102	...	2665	Argûs .....χ	3·7	84·19	11	7 53 51·292	+1·5310	−0·003	...	...
545	1140	VII. 270	2657	2 Cancri ....ω	5·9	84·17	7	7 53 58·350	+3·6381	−0·013	−0·0011	−0·001
546*	1145	VII. 278	2660	27 Monocerotis.....	5·1	81·03	14	7 53 59·431	+3·0033	−0·003	−0·0065	−0·026
547	1150	VII. 281	2662	12 Puppis	5·2	83·10	3	7 54 9·790	+2·5739	+0·001	−0·0027	−0·005
548	...	...	...	C.Z. VII. 4078.....	8·0	83·10	2	7 54 40·930	+2·3811	+0·001	...	...
549	...	...	...	B.D. + 14° No. 1866	9·5*	84·98	3	7 54 51·520	+3·3795	−0·008	...	...
550	1153	VII. 289	2673	Canis Minoris 12 H...	4·6	84·21	4	7 56 16·985	+3·1265	−0·004	−0·0024	−0·002
551	1149	VII. 285	2672	Geminorum .....χ	5·0	84·00	3	7 56 27·300	+3·6964	−0·015	−0·0025	−0·003
552	3238	...	...	Lacaille 3238	6·8	82·02	11	7 56 41·169	−4·5535	−0·377	...	...
553	...	VII. 291	2679	Piazzi VII. 291	8·0*	81·27	7	7 56 57·520	+3·2836	−0·007	...	...
554	3118	...	2685	Lacaille 3118	6·6	83·10	3	7 57 25·030	+2·1954	+0·001	...	...
555	...	...	...	.....	9†	83·12	2	7 59 16·630	+2·3852	+0·001	...	...
556†	3136	VII. 306	2710	Argûs ....ζ	2·5	84·16	7	7 59 32·550	+2·1108	+0·001	...	...
557	...	...	...	B.D. + 14° No. 1822	8·8*	84·97	2	7 59 40·280	+3·3738	−0·008	...	...
558	...	...	...	Lalande 15832..... ...	7	81·27	7	7 59 57·293	+3·0674	−0·004	...	...
559	3146	...	2719	Lacaille 3146	6·6	83·10	3	8 1 18·470	+2·3160	+0·001	...	...
560*	1170*	VII. 320	2728	15 Argûs ..... ρ	2·9	82·52	25	8 2 38·762	+2·5610	+0·001	−0·0075	−0·019

528. γ Monocerotis in B.A.C.
531. 3 Puppis in B.A.C., *l* Puppis in A.G.C.
537. B.A.C. omits Flamsteed No.
538. 9 Navis in *Ast. Nach.* 2890.
542. J Puppis in A.G.C., R Puppis in B.A.C.
543. 11 Navis *e* in Auwers' Bradley and *Ast. Nach.* 2890, *j* Puppis in A.G.C.
545. ω¹ Cancri in B.A.C.
551. 6 Cancri in B.A.C.
560. Fundamental Star for Southern Zones. 15 Navis *i* in Auwers' Bradley and *Ast. Nach.* 2890; Flamsteed No. omitted in B.A.C. and letter in N.A.

No.	Mean Date. 1800+	No. of Obs.	Mean Dec. 1885·0.	Annual Precession. 1885·0.	Secular Variation. 1885·0.	Annual Proper Motion. μ_δ.	Corr. for μ_δ to 1885·0.	Fallows and Henderson.	Johnson.	Cape Catalogues. 1840.	1850.	1860.	1880.	A.G.C. 1875.	Melbourne, 1870 and 1880.
			° ′ ″	″	″	″	″								
526	83·11	2	+ 14 28 35·29	− 8·122	− 0·45	...	...	...	...	...	...	...	...	...	...
527	83·10	2	− 30 15 17·53	− 8·128	− 0·31	...	...	...	...	...	...	...	...	...	...
528*	82·69	19	− 9 17 0·75	− 8·137	− 0·38	− 0·024	−0·06	...	179	...*	1284	...	3791	9933	*424*
529	84·00	6	+ 24 40 22·31	− 8·276	− 0·48	− 0·055	−0·06	...	...	914	1291	283	...	...	...
530	82·12	17	+ 28 18 11·30	− 8·339	− 0·49	− 0·051	−0·15	*160*	...	916	1294	284	3823	...	363*
531*	81·90	12	− 28 40 49·66	− 8·410	− 0·32	− 0·01	−0·03	...	180	922	1299	285	3831	10033	364
532	84·00	6	+ 33 41 48·74	− 8·482	− 0·51	− 0·006	−0·01	...	...	...	...	...	...	...	...
533	81·30	12	− 14 17 5·91	− 8·526	− 0·36	+ 0·013	+0·05	...	...	...	1309	...	3854	10093	*428*
534	81·16	4	− 25 39 8·29	− 8·736	− 0·32	...	...	...	...	938	1326	289	3895	10182	...
535	84·97	2	+ 14 58 52·83	− 8·750	− 0·44	...	...	...	...	...	...	...	...	...	...
536	83·11	2	+ 15 7 52·01	− 8·794	− 0·44	...	...	...	...	...	...	...	...	...	*432*
537*	84·00	9	− 24 34 17·77	− 8·826	− 0·33	+ 0·024	+0·02	...	182	943	1332	291	3917	10225	*433*
538*	81·64	12	− 13 35 36·10	− 8·983	− 0·36	− 0·339	−1·14	...	183	...	1347	294	3945	10289	*435*
539	84·17	8	+ 27 3 45·45	− 8·984	− 0·48	− 0·028	−0·02	...	...	948	1342	...	...	...	...
540	84·20	8	− 40 16 46·37	− 9·125	− 0·26	...	...	...	185	957	1355	...	3965	10343	380
541	81·11	6	+ 9 10 2·36	− 9·204	− 0·42	...	...	...	...	...	...	...	...	...	...
542*	84·19	8	− 47 48 11·97	− 9·254	− 0·22	...	...	...	187	...	1361	298	3981	10392	384
543*	81·24	12	− 22 34 25·86	− 9·408	− 0·33	+ 0·028	+0·11	...	...	965	1365	...	3997	10450	*438*
544	84·19	11	− 52 40 26·89	− 9·557	− 0·19	...	...	156*	188	970	1373	301	4017	10507	389
545*	84·17	7	+ 25 42 24·35	− 9·566	− 0·46	+ 0·013	+0·01	...	...	...	...	...	...	...	...
546	81·44	11	− 3 22 1·35	− 9·567	− 0·38	+ 0·011	+0·04	...	...	...	1370	300	4018	10500	388*
547	...	...	− 22 59 (55)	− 9·581	− 0·33	+ 0·020	...	...	...	...	1372	...	4021	10512	...
548	83·10	2	− 30 30 38·94	− 9·621	− 0·30	...	...	...	...	...	...	...	...	...	...
549	84·98	3	+ 14 40 37·43	− 9·635	− 0·43	...	...	...	...	...	...	...	...	...	...
550	84·21	4	+ 2 38 58·25	− 9·744	− 0·39	+ 0·123	+0·10	...	...	...	...	...	4050	...	...
551*	84·00	3	+ 28 6 56·28	− 9·757	− 0·47	− 0·039	−0·04	...	...	973	...	304	...	...	391*
552	82·41	13	− 81 17 48·33	− 9·774	+ 0·58	...	...	...	...	985	...	...	4068	10637	...
553	81·13	6	+ 10 15 49·01	− 9·795	− 0·41	...	...	...	...	...	...	...	...	...	...
554	...	...	− 36 57 (53)	− 9·830	− 0·28	...	...	...	...	...	1384	...	4071	10626	...
555*	83·12	2	− 30 38 41·18	− 9·972	− 0·30	...	...	...	...	...	...	...	...	...	...
556	84·16	7	− 39 40 46·60	− 9·993	− 0·26	...	...	157*	189	982	1398	305	4097	10691	396
557	84·97	2	+ 14 34 40·72	−10·001	− 0·42	...	...	...	...	...	...	...	...	...	*454*
558	81·13	6	− 0 14 45·82	−10·023	− 0·38	...	...	...	...	...	...	...	...	10701	...
559	...	...	− 33 14 (27)	−10·125	− 0·29	...	...	...	...	...	1404	...	4107	10728	...
560*	82·68	25	− 23 58 23·93	−10·227	− 0·32	+ 0·061	+0·14	*90*	190	987	1408	308	4127	10763	398*

555. Magnitude from Cape Observations.

No.	Bradley or Lacaille.	Piazzi.	B.A.C.	Star's Name.	Mag.	Mean Date. 1800+	No. of Obs.	Mean R.A. 1885·0.	Annual Precession. 1885·0.	Secular Variation. 1885·0.	Annual Proper Motion. μ_α.	Corr. for μ_α to 1885·0.
								h m s	s	s	s	s
561	1168	VII. 316	2725	29 Monocerotis.....	4·5	81·33	6	8 2 48·835	+3·0192	— 0·003	—0·0027	—0·010
562	...	...	...	Lalande 15939.....	7·9*	84·97	2	8 3 39·510	+3·3765	— 0·009	...	...
563	3911	...	2878	Octantis.....A	7¾	81·87	23	8 3 46·553	—41·6732	—16·85	—0·014*	—0·044
564	...	...	...	C.Z. VIII. 275.....	9½	83·11	2	8 4 0·540	+2·3940	+ 0·001	...	...
565	1175	VIII. 5	2744	16 Cancri.....ζ	5·0†	84·19	6	8 5 36·990	+3·4430	— 0·010	+0·0033	+0·003
566	1177	VIII. 11	2750	19 Puppis	4·6	81·86	7	8 5 52·557	+2·8178	— 0·001	—0·0031	—0·010
567†	3185	...	2755	Argûs .....γ	3·0	84·17	8	8 5 59·300	+1·8500	0·000	...	...
568*	1179	VIII. 18	2769	20 Puppis	5·1	82·72	20	8 8 2·830	+2·7593	0·000	—0·0020	—0·005
569	1180	VIII. 28	2778	17 Cancri .....β	3·8	82·35	69	8 10 16·715	+3·2617	— 0·007	—0·0044	—0·012
570	...	...	...	W.B. (2) VIII. 211...	6·5*	81·26	3	8 11 44·940	+3·3949	— 0·010	...	...
571*	...	...	...	Lalande 16304.....	6·0	81·99	13	8 12 56·401	+2·8298	— 0·001	+0·0163	+0·049
572	...	...	...	.....	9†	83·11	3	8 13 35·820	+2·4182	+ 0·002	...	...
573	...	...	...	B.D. + 14° No. 1882	9·5*	84·97	2	8 16 28·570	+3·3518	— 0·009	...	...
574	1189	VIII. 55	2807	22 Puppis	6·7	82·03	12	8 17 22·500	+2·8239	— 0·001	—0·0034	—0·010
575	...	...	...	Lalande 16534..... ...	6·5*	83·16	5	8 19 37·350	+3·1201	— 0·005	...	...
576	...	...	...	Lalande 16546.....	7·5*	83·21	5	8 19 51·220	+3·1096	— 0·005	...	...
577*	1197	VIII. 69	2825	Bradley 1197	3·9	81·89	53	8 19 54·870	+3·0048	— 0·003	—0·0058	—0·018
578	...	...	...	W.B. VIII. 486	6·7	81·81	6	8 20 3·490	+2·9071	— 0·002	...	...
579†	3327	...	2832	Argûs .....ε	2·1	84·21	2	8 20 9·250	+1·2405	— 0·009	—0·005*	—0·004
580	...	...	...	Lalande 16613.....	8·0*	83·22	5	8 21 35·090	+3·0953	— 0·005	...	...
581	...	...	...	Lalande 16645.....	7·7*	83·25	5	8 22 20·300	+3·0842	— 0·004	...	...
582	3326	...	2846	Lacaille 3326	6·5	81·18	6	8 23 0·800	+2·5490	+ 0·002	...	...
583	...	...	...	W.B. VIII. 565	7·7*	83·18	5	8 23 14·940	+3·0740	— 0·004	...	...
584	...	VIII. 83	...	Piazzi VIII. 83	7·0	83·17	5	8 23 38·840	+3·0614	— 0·004	...	...
585†	3435	...	2870	Chamæleontis .....θ	4·7	83·20	21	8 24 4·462	—1·6537	— 0·162	—0·050*	—0·090
586†	3384	...	2863	Volantis .....β	3·9	84·19	9	8 24 28·957	+0·6747	— 0·025	—0·009*	—0·007
587	...	...	2855	Lalande 16704.....	6·0	84·24	4	8 25 26·350	+3·9261	— 0·026	—0·0151	—0·011
588	1207	VIII. 88	2862	33 Cancri .....η	5·5	83·80	5	8 26 3·458	+3·4812	— 0·013	—0·0039	—0·005
589*	...	VIII. 95	2868	Piazzi VIII. 95	5·4	81·41	17	8 26 20·861	+2·6988	0·000	+0·0016	+0·006
590	...	...	...	W.B. VIII. 653	7·8*	85·02	2	8 27 13·260	+3·3381	— 0·010	...	...
591	...	VIII. 98	2872	Piazzi VIII. 98	6·8*	83·14	2	8 27 22·810	+3·3322	— 0·009	...	...
592	...	...	...	W.B. VIII. 667	9·1*	85·00	2	8 27 55·130	+3·3402	— 0·010	...	...
593	...	...	...	Lalande 16889.....	8·0*	85·03	2	8 29 47·525	+3·3405	— 0·010	...	...
594*	1212	VIII. 109	2893	Bradley 1212	5·7	81·11	13	8 29 51·454	+2·9311	— 0·002	—0·0040	—0·016
595	3537	...	2928	Lacaille 3537	6·2	83·28	22	8 31 6·388	—3·2670	— 0·345	...	...

563. The letter A having been in use for many years at the Cape is retained.

594. 3 Hydræ in B.A.C.

No.	Mean Date. 1800+	No. of Obs.	Mean Dec. 1885·0.	Annual Precession. 1885·0.	Secular Variation. 1885·0.	Annual Proper Motion. μ_δ.	Corr. for μ_δ to 1885·0.	Fallows and Henderson.	Johnson.	Cape Catalogues. 1840.	1850.	1860.	1880.	A.G.C. 1875.	Melbourne, 1870 and 1880.
			° ′ ″	″	″	″	″								
561	81·35	5	− 2 38 59·54	−10·240	− 0·37	+ 0·018	+0·07	...	...	...	1407	307	4128	10764	...
562	84·97	2	+ 14 50 52·05	−10·303	− 0·42	...	...	...	...	...	...	...	...	...	...
563*	82·02	14	− 88 31 56·37	−10·315	+ 5·22	+ 0·02*	+0·06	5	...	1061	...	324	4191	11013	408*
564	83·11	2	− 30 37 34·29	−10·330	− 0·29	...	...	...	...	...	...	...	...	...	...
565*	84·19	6	+ 17 59 37·57	−10·449	− 0·42	− 0·104	−0·08	...	...	...	...	...	...	...	...
566	81·64	4	− 12 35 12·22	−10·469	− 0·35	+ 0·022	+0·07	...	...	...	1418	...	4159	...	...
567	84·17	8	− 46 59 52·94	−10·477	− 0·23	...	...	158*	192	995	1422	311	4163	10863	402
568	82·71	22	− 15 26 32·56	−10·630	− 0·34	− 0·009	−0·02	...	193	...	1430	312	4200	10925	478
569	82·81	26	+ 9 32 21·23	−10·796	− 0·40	− 0·041	−0·09	...	...	...	...	315	4226	...	482
570	81·26	3	+ 16 2 1·88	−10·904	− 0·41	...	...	...	...	...	...	...	...	...	...
571	81·99	13	− 12 14 32·74	−10·990	− 0·34	− 0·998	−3·00	...	...	...	...	...	...	11070	488
572*	83·11	3	− 30 22 41·90	−11·039	− 0·29	...	...	...	...	...	...	...	...	...	...
573	84·97	2	+ 14 9 58·04	−11·249	− 0·40	...	...	...	...	...	...	...	...	...	...
574	82·03	12	− 12 41 8·23	−11·314	− 0·34	− 0·025	−0·07	...	...	...	1456	321	4298	11200	...
575	83·16	5	+ 2 28 33·08	−11·475	− 0·37	...	...	...	...	...	...	...	...	...	...
576	83·21	5	+ 1 56 59·10	−11·492	− 0·37	...	...	...	...	...	...	...	...	...	...
577	82·22	27	− 3 31 55·24	−11·496	− 0·35	+ 0·007	+0·02	...	...	1027	1467	...	4333	11266	496
578	81·51	3	− 8 34 56·31	−11·506	− 0·34	...	...	...	...	...	...	...	...	11274	...
579	84·21	2	− 59 8 22·78	−11·513	− 0·14	+ 0·03*	+0·02	160*	196	1031	1472	323	4336	11285	411*
580	83·22	4	+ 1 12 17·37	−11·616	− 0·36	...	...	...	...	...	...	...	...	...	...
581	83·25	5	+ 0 37 26·82	−11·669	− 0·36	...	...	...	...	...	...	...	...	...	...
582	81·20	4	− 25 45 9·68	−11·717	− 0·30	...	...	...	...	...	1480	...	4367	11363	414
583	83·18	5	+ 0 4 52·54	−11·734	− 0·36	...	...	...	...	...	...	...	...	...	...
584	83·17	5	− 0 34 39·30	−11·763	− 0·36	...	...	...	...	...	...	...	4376	11373	...
585	83·28	23	− 77 6 46·32	−11·793	+ 0·20	+ 0·01*	+0·02	...	200	1047	1498	330	4389	11405	419*
586	84·19	9	− 65 45 10·48	−11·821	− 0·07	− 0·12*	−0·10	162	199	1042	1492	328	4398	11407	418
587	84·24	4	+ 38 24 36·33	−11·888	− 0·46	− 0·208	−0·16	...	...	...	...	...	...	...	...
588	84·00	4	+ 20 49 52·52	−11·932	− 0·40	− 0·047	−0·05	...	...	1040	...	329	...	...	421*
589	81·57	13	− 19 11 22·31	−11·953	− 0·31	+ 0·011	+0·04	...	...	1044	1496	...	4418	11445	506
590	85·02	2	+ 13 56 31·50	−12·014	− 0·38	...	...	...	...	...	...	...	...	...	...
591	83·14	2	+ 13 38 58·80	−12·025	− 0·38	...	...	...	...	...	...	...	...	...	...
592	85·00	2	+ 14 4 40·21	−12·063	− 0·38	...	...	...	...	...	...	...	...	...	...
593	85·03	2	+ 14 10 26·70	−12·194	− 0·38	...	...	...	...	...	...	...	...	...	...
594*	81·26	13	− 7 35 13·46	−12·198	− 0·34	+ 0·034	+0·13	...	...	...	1510	...	4468	11543	508
595	83·37	25	− 80 32 10·05	−12·284	+ 0·38	...	...	...	...	...	1525	...	4486	11598	425*

565. Magnitude from Struve's *Mensuræ Micrometricæ*.

572. Magnitude from Cape Observations.

No.	Bradley or Lacaille.	Piazzi.	B.A.C.	Star's Name.	Mag.	Mean Date. 1800+	No of Obs.	Mean R.A. 1885·0.	Annual Precession. 1885·0.	Secular Variation. 1885·0.	Annual Proper Motion. μ_α	Corr. for μ_α to 1885·0.
								h m s	s	s	s	s
596	...	...	...	O.A. (s) 8763	9†	83·12	1	8 31 21·830	+2·4757	+0·002	...	...
597	1217	VIII. 114	2901	4 Hydræ .....δ	4·1	82·87	23	8 31 34·081	+3·1852	—0·007	—0·0065	—0·014
598	...	...	...	A.G.C. 11594	8½	83·12	1	8 31 39·960	+2·4722	+0·002	...	...
599	1221	VIII. 123	2911	5 Hydræ .....σ	4·4	84·18	6	8 32 44·768	+3·1412	—0·006	—0·0038	—0·003
600*	1229	VIII. 138	2929	6 Hydræ	5·2	81·43	15	8 34 34·570	+2·8491	—0·001	—0·0077	—0·027
601	3450	VIII. 140	2932	Pyxidis .....ζ	4·9	81·46	12	8 34 56·114	+2·4907	+0·002	...	...
602	...	...	...	Lalande 17130.....	9·0*	84·97	2	8 35 57·230	+3·3274	—0·010	...	...
603	1230	VIII. 142	2937	43 Cancri.....γ	4·8	84·00	6	8 36 37·830	+3·4888	—0·014	—0·0087	—0·009
604	3470	VIII. 155	2947	Velorum .....b	4·1	84·20	10	8 36 48·676	+1·9906	+0·002	...	...
605	3482	...	2950	Argûs .....o	4·0	84·22	5	8 36 59·998	+1·7225	—0·001	...	...
606	1238	VIII. 152	2954	31 Monocerotis.....	4·8	81·78	8	8 38 1·515	+2·9490	—0·002	—0·0017	—0·005
607	1236	VIII. 150	2953	47 Cancri.....δ	4·3	84·25	4	8 38 8·938	+3·4189	—0·012	—0·0026	—0·002
608	...	...	...	W.B. VIII. 979	8·7*	84·97	2	8 39 38·270	+3·3222	—0·010	...	...
609	1239	VIII. 158	2965	48 Cancri .....ι	4·2*	84·00	2	8 39 44·240	+3·6449	—0·019	—0·0016	—0·002
610	1243	VIII. 164	2971	11 Hydræ .....ε	3·6	82·47	46	8 40 41·190	+3·1949	—0·007	—0·0135	—0·034
611	1244	VIII. 166	2975	12 Hydræ	4·4	81·72	6	8 40 56·525	+2·8344	0·000	+0·0005	+0·002
612*	...	VIII. 167	2976	Piazzi VIII. 167.....	5·1	82·17	12	8 41 25·284	+3·0461	—0·004	—0·0036	—0·010
613*	...	...	...	Lalande 17333.....	6·5	82·18	12	8 41 31·000	+2·7349	+0·001	+0·0036	+0·010
614†	3532	...	2979	Argûs .....δ	2·2	84·21	10	8 41 31·756	+1·6558	—0·002	0·000*	0·000
615	1249	VIII. 177	2987	14 Hydræ	5·1	81·97	12	8 43 35·023	+3·0191	—0·003	—0·0036	—0·011
616*	1256	VIII. 189	3011	15 Hydræ	5·5	81·45	12	8 45 55·353	+2·9539	—0·002	—0·0047	—0·017
617	...	...	...	A.G.C. 12041	8¾	83·18	2	8 46 58·010	+2·5187	+0·003	...	...
618	1255	VIII. 192	3016	57 Cancri .....σ²	5·5	84·18	7	8 47 13·600	+3·6715	—0·021	+0·0020	+0·002
619	...	...	...	.....	10½†	85·00	2	8 49 14·340	+3·3084	—0·010	...	...
620	1261	VIII. 210	3032	16 Hydræ .....ζ	3·3	82·05	38	8 49 18·894	+3·1830	—0·007	—0·0075	—0·022
621	...	...	...	Lalande 17646.	6·6	81·69	6	8 51 13·765	+2·7862	0·000	...	...
622	1260	VIII. 212	3048	9 Ursæ Majoris.....ι	3·2	82·00	12	8 51 19·960	+4·1802	—0·045	—0·0441	—0·132
623	...	...	...	C.Z. VIII. 4180	9½	83·19	2	8 51 55·970	+2·5383	+0·003	...	...
624	1269	VIII. 222	3055	65 Cancri .....α	4·3	84·00	9	8 52 11·823	+3·2855	—0·010	+0·0010	+0·001
625†	3626	...	3064	Carinæ c	4·0	84·20	5	8 52 26·470	+1·3677	—0·008	...	...
626	...	...	...	W.B. VIII. 1314.....	9·0*	84·97	2	8 52 37·890	+3·3050	—0·010	...	...
627*	...	VIII. 227	3065	Piazzi VIII. 227.....	5·9	81·18	12	8 53 20·055	+2·7991	0·000	+0·0200	+0·076
628	...	...	...	C.Z. VIII. 4304	9½	83·20	2	8 53 31·480	+2·5508	+0·003	...	...
629	1272	VIII. 230	3075	12 Ursæ Majoris .....κ	3·7	82·00	6	8 55 46·200	+4·1270	—0·043	—0·0036	—0·011
630	3636	...	3082	Lacaille 3636	6·4	81·18	6	8 56 12·120	+2·5993	+0·003	...	...

601. *f* Mali in B.A.C.

606. B.A.C. assigns this Star to Hydra.

No.	Mean Date. 1800+	No. of Obs.	Mean Dec. 1885·0.	Annual Precession. 1885·0.	Secular Variation. 1885·0.	Annual Proper Motion. μ_δ	Corr. for μ_δ to 1885·0.	Fallows and Henderson.	Johnson.	Cape Catalogues. 1840.	1850.	1860.	1880.	A.G.C. 1875.	Melbourne. 1870 and 1880.
			° ′ ″	″	″	″	″								
596*	83·12	1	— 29 28 26·80	—12·302	— 0·28	...	...	...	...	...	...	...	...	...	...
597	83·39	15	+ 6 6 14·25	—12·316	— 0·36	— 0·001	0·00	...	...	...	...	...	4485	...	...
598	83·12	1	— 29 38 28·46	—12·323	— 0·28	...	...	...	...	...	...	...	...	11594	...
599	84·18	6	+ 3 44 40·41	—12·397	— 0·36	— 0·003	0·00	...	...	...	...	...	4500	...	...
600	81·70	12	— 12 4 9·93	—12·523	— 0·32	+ 0·006	+0·02	...	...	1062	1524	334	4525	11678	*511*
601*	81·46	12	— 29 9 7·72	—12·547	— 0·28	...	...	...	...	1063	1526	...	4529	11696	...
602	84·97	2	+ 13 47 11·81	—12·617	— 0·37	...	...	...	...	...	...	...	...	...	...
603	84·00	7	+ 21 52 53·25	—12·663	— 0·39	— 0·033	—0·03	...	...	1065	1531	336	4546	...	*513*
604	84·20	10	— 46 14 23·68	—12·675	— 0·22	...	...	...	202	1069	1537	337	4551	11755	429
605	84·22	5	— 52 30 49·55	—12·688	— 0·19	...	...	...	203	1073	1540	338	4555	11760	430
606*	81·22	3	— 6 49 12·59	—12·757	— 0·33	+ 0·030	+0·11	...	...	...	1544	...	4568	11784	...
607	84·25	4	+ 18 34 35·34	—12·766	— 0·38	— 0·226	—0·17	...	...	1072	1542	339	...	...	...
608	84·97	2	+ 13 41 5·65	—12·866	— 0·37	...	...	...	...	...	...	...	...	...	...
609	84·00	2	+ 29 10 46·87	—12·872	— 0·40	— 0·033	—0·03	...	...	...	...	...	...	...	...
610	82·40	30	+ 6 50 24·38	—12·936	— 0·35	— 0·023	—0·06	*135*	...	1081	1556	341	4610	...	434*
611	81·25	3	— 13 7 40·90	—12·953	— 0·31	— 0·009	—0·03	...	...	...	1560	...	4613	11866	435
612	82·15	11	— 1 28 35·18	—12·985	— 0·33	+ 0·017	+0·05	...	...	...	1561	342	4621	11876	*516*
613	82·18	12	— 18 20 13·85	—12·992	— 0·30	+ 0·007	+0·02	...	...	...	...	...	...	11881	*517*
614	84·21	10	— 54 17 14·73	—12·992	— 0·18	— 0·10*	—0·08	167*	206	1086	1563	343	4627	11887	436*
615	81·97	12	— 3 1 0·75	—13·129	— 0·33	— 0·019	—0·06	...	...	...	1570	345	4660	11946	...
616	81·56	11	— 6 44 49·41	—13·283	— 0·32	0·000	0·00	...	...	...	1583	348	4688	12012	*522*
617	83·18	2	— 29 1 53·29	—13·351	— 0·27	...	...	...	...	...	...	...	...	12041	...
618	84·18	7	+ 31 0 51·80	—13·368	— 0·39	— 0·021	—0·02	...	...	...	...	...	...	...	...
619*	85·00	2	+ 13 25 33·74	—13·498	— 0·35	...	...	...	...	...	...	...	...	...	...
620	82·25	28	+ 6 22 57·29	—13·504	— 0·34	+ 0·016	+0·04	...	...	..	...	...	4724	...	...
621	81·43	4	— 16 16 1·90	—13·627	— 0·29	...	...	...	...	...	...	...	...	12145	...
622	82·00	12	+ 48 29 35·27	—13·634	— 0·44	— 0·247	—0·74	*170*	...	1103	1601	...	...	...	444*
623	83·19	2	— 28 38 18·14	—13·672	— 0·27	...	...	...	...	...	...	...	...	..	...
624	84·00	9	+ 12 18 7·95	—13·689	— 0·34	— 0·022	—0·02	168	...	1108	1606	351	4752	...	*526*
625	84·20	5	— 60 12 19·89	—13·704	— 0·14	...	...	...	...	1113	1611	...	4755	12175	445
626	84·97	2	+ 13 24 51·09	—13·717	— 0·35	...	...	...	...	...	...	...	...	...	...
627	81·21	12	— 15 41 41·91	—13·762	— 0·29	+ 0·230	+0·87	...	...	...	1612	353	4765	12192	*528*
628	83·20	2	— 28 13 37·80	—13·773	— 0·26	...	...	...	...	...	...	...	...	...	...
629	81·82	13	+ 47 36 40·01	—13·916	— 0·43	— 0·068	—0·22	...	...	...	...	...	...	...	...
630	81·21	4	— 26 12 42·82	—13·943	— 0·27	...	...	...	...	...	1622	...	4789	12265	...

596. Magnitude from Oeltzen's Argelander.

619. Magnitude from Cape Observations.

No.	Bradley or Lacaille.	Piazzi.	B.A.C.	Star's Name.	Mag.	Mean Date. 1800+	No. of Obs.	Mean R.A. 1885·0.	Annual Precession. 1885·0.	Secular Variation. 1885·0.	Annual Proper Motion. μ_α.	Corr. for μ_α to 1885·0.
								h m s	s	s	s	s
631	1287	VIII. 255	3111	76 Cancri.....κ	5·0	82·77	22	9 1 31·082	+3·2572	—0·009	—0·0028	—0·006
632*	1292	VIII. 264	3120	19 Hydræ	5·5	80·56	12	9 3 4·520	+2·9392	—0·002	—0·0023	—0·010
633†	3699	IX. 1	3126	Argûs ....λ	2·5	84·21	12	9 3 46·020	+2·2064	+0·004	—0·004*	—0·003
634	...	...	...	B.D. + 13° No. 2050	9·0*	84·97	2	9 4 31·010	+3·2867	—0·010	...	...
635	...	...	3133	Lalande 18150	7·2*	81·18	6	9 6 12·420	+3·1421	—0·006	...	...
636*	...	IX. 13	...	Piazzi IX. 13	5·7	81·66	11	9 6 42·687	+2·7516	+0·002	—0·0031	—0·010
637	3738	...	3149	Carinæ ..... *a*	3·8	84·21	8	9 7 56·321	+1·5843	—0·003	...	...
638*	1303	IX. 18	3146	22 Hydræ ....θ	3·9	82·06	55	9 8 22·828	+3·1169	—0·006	+0·0078	+0·023
639	3753	...	3152	Carinæ .....*i*	4·3	84·22	7	9 8 39·930	+1·3740	—0·008	—0·015*	—0·012
640	...	...	...	A.G.C. 12569	9†	83·21	2	9 9 13·830	+2·6120	+0·003	...	...
641	1308	IX. 32	3161	24 Hydræ	5·5	81·89	6	9 11 3·330	+2·9418	—0·002	—0·0028	—0·009
642	1305	IX. 29	3162	38 Lyncis (2nd star) ...	4·0†	84·22	2	9 11 41·180	+3·7546	—0·029	—0·0031	—0·002
643†	3791	...	3177	Argûs .....β	2·0	84·40	4	9 11 56·125	+0·7114	—0·035	—0·032*	—0·019
644	1309	IX. 42	3171	83 Caneri	6·6	84·00	6	9 12 33·790	+3·3656	—0·013	—0·0090	—0·009
645	3953	...	3211	Octantis.....ζ	5·7	82·35	46	9 13 11·067	—7·5204	—1·566	—0·080*	—0·212
646†	3792	...	3186	Argûs .....*t*	2·5	84·00	7	9 14 0·643	+1·6098	—0·002	—0·0090	—0·009
647	1312	IX. 48	3178	40 Lyncis	3·4	84·00	3	9 14 2·850	+3·6897	—0·027	—0·0202	—0·020
648	...	...	...	W.B. IX. 263	8·5*	84·97	2	9 14 42·010	+3·2672	—0·010	...	...
649*	3793	IX. 63	3195	Pyxidis .....θ	4·9	80·79	12	9 16 24·025	+2·6553	+0·003	—0·0015	—0·006
650	3804	IX. 75	3207	Pyxidis ..... λ	4·9	81·79	12	9 18 13·604	+2·6046	+0·004	...	...
651†	3816	...	3213	Argûs .....κ	2·7	84·17	14	9 18 33·164	+1·8577	+0·003	...	...
[652	1326	IX. 77	3216	28 Hydræ	5·8	81·71	6	9 19 39·025	+3·0028	—0·003	—0·0033	—0·011
653*	1330	IX. 89	3223	30 Hydræ .....*a*	2·0	82·47	64	9 21 56·185	+2·9504	—0·001	—0·0019	—0·005
654	...	...	...	C.Z. IX. 1830	8½	83·17	3	9 23 18·540	+2·6642	+0·004	...	...
655	1334	IX. 94	3237	31 Hydræ .....r^1	5·0*	81·71	6	9 23 18·690	+3·0390	—0·004	+0·0079	+0·026
656	...	...	...	W.B. IX. 492	8·8*	84·98	2	9 24 51·370	+3·2560	—0·010	...	...
657*	1341	IX. 110	3253	32 Hydræ .....r^2	4·6	81·33	15	9 26 7·163	+3·0626	—0·004	—0·0015	—0·006
658†	3885	IX. 116	3257	Argûs .....ψ	3·7	84·20	6	9 26 10·220	+2·3756	+0·007	—0·019*	—0·015
659	...	...	...	W.B. IX. 533	9·2*	85·00	2	9 26 25·075	+3·2526	—0·010	...	...
660	1340	IX. 111	3261	10 Leonis Minoris	4·7	84·00	3	9 27 10·600	+3·6934	—0·029	+0·0008	+0·001
661	3910	...	3269	Velorum .....N	3·2	84·20	11	9 27 43·656	+1·8257	+0·003	...	...
662*	...	...	...	Lalande 18817.....	5·2	81·81	12	9 27 54·754	+2·7628	+0·003	+0·0018	+0·006
663	3981	...	3279	Chamæleontis .....*t*	5·8	82·40	13	9 27 56·800	—1·7390	—0·296	—0·060*	—0·156
664	1344	IX. 123	3271	33 Hydræ .....A	5·7	81·65	7	9 28 48·376	+2·9949	—0·002	—0·0015	—0·005
665	...	...	...	W.B. IX. 682	8·5*	83·10	2	9 32 20·950	+3·0590	—0·004	...	...

647. *a* Lyncis in B.A.C.
652. A Hydræ in B.A.C. In Auwers' Bradley this letter is assigned to No. 664.
664. *Vide* 652.
649. Fundamental Star for Southern Zones; *h* Mali in B.A.C.
662. Fundamental Star for Southern Zones.

No.	Mean Date. 1800+	No. of Obs.	Mean Dec. 1885·0.	Annual Precession. 1885·0.	Secular Variation. 1885·0.	Annual Proper Motion. μ_δ.	Corr. for μ_δ to 1885·0.	Fallows and Henderson.	Johnson.	Cape Catalogues. 1840.	1850.	1860.	1880.	A.G.C. 1875.	Melbourne, 1870 and 1880.
			° ′ ″	″	″	″	″								
631	83·10	20	+ 11 7 49·37	−14·273	− 0·33	+ 0·009	+0·02	171	...	...	...	359	4839	...	*532*
632	80·64	12	− 8 7 30·52	−14·368	− 0·30	+ 0·002	+0·01	...	...	...	1636	...	4851	12417	*534*
633	84·21	12	− 42 38 7·15	−14·411	− 0·22	+ 0·01*	+0·01	172*	214	1131	1640	363	4860	12438	457
634	84·97	2	+ 13 1 21·72	−14·457	− 0·33	...	...	...	...	...	...	...	...	...	*535*
635	81·20	2	+ 4 20 16·35	−14·558	− 0·31	...	...	...	...	...	...	...	...	...	...
636	81·78	12	− 19 16 41·33	−14·589	− 0·27	+ 0·054	+0·17	...	...	...	...	...	...	12505	*536*
637	84·21	8	− 58 29 45·83	−14·662	− 0·15	...	...	...	216	1138	1652	...	4898	12535	459
638	82·18	28	+ 2 47 56·91	−14·689	− 0·30	− 0·309	−0·87	...	...	...	...	...	4904	...	*538*
639	84·22	7	− 61 50 42·72	−14·706	− 0·13	0·00*	0·00	...	217	1140	1654	368	4910	12557	460
640	83·21	2	− 26 55 26·37	−14·740	− 0·25	...	...	...	...	...	...	...	...	12569	...
641	81·53	3	− 8 15 55·69	−14·847	− 0·28	+ 0·025	+0·09	...	...	...	1663	369	4937	12611	...
642*	84·22	2	+ 37 17 18·83	−14·884	− 0·36	− 0·114	−0·09	...	...	...	...	...	...	...	...
643	84·40	4	− 69 14 36·25	−14·899	− 0·06	+ 0·09*	+0·05	174*	218	1151	1672	373	4949	12636	464*
644	84·00	5	+ 18 11 32·72	−14·936	− 0·32	− 0·139	−0·14	...	...	1148	...	372	4956	...	463*
645	82·94	22	− 85 12 3·31	−14·973	+ 0·74	+ 0·02*	+0·04	...	...	1165	1695	377	4967	12688	467*
646*	84·00	7	− 58 47 34·38	−15·020	− 0.15	+ 0·028	+0·03	175*	219	1154	1677	374	4968	12672	466*
647*	84·00	3	+ 34 52 42·49	−15·022	− 0·35	+ 0·027	+0·03	...	...	...	...	...	...	...	. .
648	84·97	2	+ 12 26 44·45	−15·060	− 0·31	...	...	...	...	...	...	...	...	...	...
649*	80·81	10	− 25 28 35·00	−15·158	− 0·25	+ 0·048	+0·20	176	220	1156	1685	376	4996	12728	468*
650	81·79	12	− 28 20 33·41	−15·262	− 0·24	...	...	...	...	1159	1691	...	5012	12775	...
651	84·17	14	− 54 31 11·11	−15·280	− 0·17	...	...	177*	221	1161	1696	378	5018	12788	469
652*	81·23	3	− 4 37 20·17	−15·342	− 0·28	+ 0·007	+0·03	...	...	...	1699	...	5029	12815	...
653	82·92	53	− 8 9 38·61	−15·470	− 0·27	+ 0·052	+0·11	178*	222	1166	1704	379	5055	12862	471*
654	83·17	3	− 25 47 49·73	−15·547	− 0·24	...	...	...	...	...	...	...	...	...	*550*
655	81·21	3	− 2 16 0·85	−15·547	− 0·27	− 0·004	−0·02	...	...	...	1712	...	5075	12897	...
656	84·98	2	+ 12 21 47·53	−15·631	− 0·29	...	...	...	...	...	...	...	...	...	...
657	81·62	12	− 0 40 41·01	−15·700	− 0·27	− 0·013	−0·04	...	...	...	1722	...	5121	12981	*553*
658	84·20	6	− 39 57 48·94	−15·703	− 0·21	0·00*	0·00	...	224	1181	1725	381	5124	12989	477
659	85·00	2	+ 12 14 32·00	−15·717	− 0·29	...	...	...	...	...	...	...	...	...	...
660	84·00	3	+ 36 54 27·14	−15·758	− 0·33	− 0·010	−0·01	...	...	...	...	...	...	...	...
661	84·20	11	− 56 31 38·07	−15·788	− 0·16	...	...	...	225	1186	1734	382	5143	13030	479
662*	81·81	12	− 20 36 25·60	−15·798	− 0·24	+ 0·039	+0·12	...	...	...	...	...	...	13031	*555*
663	82·66	15	− 80 17 23·05	−15·800	+ 0·16	+ 0·08*	+0·19	...	...	1191	1740	383	5146	13048	...
664*	81·46	4	− 5 24 8·11	−15·846	− 0·26	− 0·027	−0·10	...	...	...	1735	...	5150	13050	...
665	83·10	2	− 0 57 29·42	−16·034	− 0·26	...	...	...	...	...	...	...	...	...	...

642. Magnitude from Struve's *Mensuræ Micrometricæ*.

646. Proper Motion from Newcomb's Catalogue of 1098 Standard Stars.

No.	Bradley or Lacaille.	Piazzi.	B.A.C.	Star's Name.	Mag.	Mean Date. 1800+	No of Obs.	Mean R.A. 1885·0.	Annual Precession. 1885·0.	Secular Variation. 1885·0.	Annual Proper Motion. μ_a	Corr. for μ_a to 1885·0.
								h m s	s	s	s	s
666	1352	IX. 139	3295	2 Sextantis	4·8	81·61	7	9 32 27·384	+3·1450	—0·007	—0·0120	—0·041
667†	3952	...	3300	Velorum .....M	4·9	84·20	10	9 32 42·626	+2·1558	+0·007	...	...
668	1356	IX. 144	3303	35 Hydræ .....ι	4·2	84·18	5	9 33 59·038	+3·0638	—0·004	+0·0015	+0·001
669*	1362	IX. 154	3311	38 Hydræ .....κ	4·9	80·66	12	9 34 47·588	+2·8778	+0·001	—0·0017	—0·007
670	...	...	...	B.D. + 12° No. 2076	8·8*	84·97	2	9 34 58·530	+3·2417	—0·010	...	...
671	1360	IX. 151	3312	14 Leonis .....o	3·8	82·71	14	9 35 0·750	+3·2177	—0·009	—0·0104	—0·024
672	4048	...	3334	Chamæleontis .....ζ	5·5	83·44	31	9 37 13·869	—1·5510	—0·292	...	...
673†	3991	IX. 166	3332	Antliæ .....θ	4·9	81·30	8	9 39 4·560	+2·6753	+0·005	..	...
674	1368	IX. 164	3331	17 Leonis.....ε	3·1	82·42	19	9 39 19·366	+3·4202	—0·018	—0·0043	—0·011
675	1376	IX. 178	3349	3 Sextantis	6·8	81·55	6	9 42 29·900	+2·9836	—0·001	—0·0049	—0·017
676	...	IX. 184	3356	Piazzi IX. 184.....	7·8*	84·97	2	9 43 40·530	+3·2268	—0·010	...	...
677	4051	...	3365	Argûs .....υ	3½	84·24	12	9 44 13·677	+1·5047	—0·004	0·000*	0·000
678	...	...	...	B.D. — 0° No. 2256...	8·0*	83·12	2	9 44 32·370	+3·0609	—0·004	...	...
679*	1385	IX. 193	3368	6 Sextantis	5·9	82·74	29	9 45 26·307	+3·0244	—0·003	+0·0005	+0·001
680	1384	IX. 194	3371	24 Leonis.....μ	4·1	84·00	4	9 46 13·330	+3·4405	—0·020	—0·0185	—0·019
681	...	...	...	A.G.C. 13480	7½	82·27	1	9 47 1·390	—6·2074	—1·595	...	...
682	4169	...	...	Lacaille 4169	7·1	82·11	19	9 47 14·335	—6·1927	—1·593	...	...
683	...	...	...	B.D. + 11° No. 2120	9·1*	84·99	2	9 47 17·190	+3·2214	—0·010	...	...
684	...	...	...	Lalande 19423.....	6·3	83·13	1	9 49 11·950	+2·7813	+0·004	...	...
685*	...	...	...	Lalande 19433.	5·3	81·80	12	9 49 26·777	+2·8316	+0·003	—0·0021	—0·007
686	...	...	...	Lalande 19499.....	8·2*	83·22	2	9 51 11·340	+2·8030	+0·004	...	...
687	...	...	...	W.B. IX. 1068.....	9·0*	81·55	3	9 51 21·823	+3·1871	—0·008	...	...
688	1396	IX. 218	3407	Bradley 1396	6·4	82·23	3	9 52 2·070	+3·1828	—0·008	—0·0003	—0·001
689†	4093	...	3410	Argûs .....φ	3·9	84·22	20	9 52 49·540	+2·1022	+0·009	...	...
690	4092	...	3414	Lacaille 4092	6¼	84·37	1	9 53 18·030	+2·2964	+0·010	...	...
691	...	...	...	W.B. IX. 1110.....	9·0*	82·24	3	9 53 22·060	+3·1833	—0·008	...	...
692*	...	IX. 223	3412	12 Sextantis	6·7	80·73	12	9 53 45·190	+3·1205	—0·006	—0·0063	—0·027
693	...	...	...	Lalande 19559.....	6·4*	83·24	2	9 53 54·230	+2·8206	+0·004	...	...
694	1398	IX. 225	3415	29 Leonis .....π	5·0	83·03	34	9 54 8·166	+3·1779	—0·008	—0·0040	—0·008
695	...	...	...	B.D. — 20° No. 3066	9·0*	83·25	1	9 54 20·460	+2·8047	+0·004	...	...
696	...	...	...	B.D. — 20° No. 3071	9·1*	83·13	1	9 55 31·570	+2·8094	+0·004	...	...
697	...	...	...	B.D. — 18° No. 2827	8·6*	83·22	2	9 55 54·450	+2·8335	+0·004	...	...
698	..	...	...	Lalande 19641.....	6·7	83·24	2	9 57 11·630	+2·8257	+0·004	...	...
699	1400	IX. 238	3436	13 Sextantis	6·5	81·21	14	9 58 10·992	+3·1169	—0·005	—0·0059	—0·022
700*	1402	IX. 241	3444	40 Hydræ .....υ²	4·7	81·58	12	9 59 31·483	+2·9236	+0·002	—0·0034	—0·012

No.	Mean Date. 1800+	No. of Obs.	Mean Dec. 1885·0.	Annual Precession. 1885·0.	Secular Variation. 1885·0.	Annual Proper Motion. μ_δ	Corr. for μ_δ to 1885·0.	Fallows and Henderson.	Johnson.	Cape Catalogues. 1840.	1850.	1860.	1880.	A.G.C. 1875.	Melbourne, 1870 and 1880.
			° ′ ″	″	″	″	″								
666	81·43	4	+ 5 10 5·19	—16·039	— 0·27	— 0·033	—0·12	...	...	...	...	...	...	...	...
667	84·20	10	— 48 50 23·43	—16·052	— 0·18	...	...	...	...	1197	1745	...	5203	13145	...
668	84·20	4	— 0 37 16·04	—16·119	— 0·26	— 0·063	—0·05	...	227	...	1748	...	5216	13164	...
669	80·66	12	— 13 48 39·71	—16·161	— 0·24	+ 0·013	+0·06	...	228	...	1753	...	5225	13184	*559*
670	84·97	2	+ 12 5 7·33	—16·171	— 0·27	...	...	...	...	...	...	...	...	...	...
671	83·22	9	+ 10 24 54·36	—16·173	— 0·27	— 0·018	—0·03	180	...	1201	1754	385	5227	...	*560*
672	83·45	32	— 80 25 27·08	—16·287	+ 0·14	...	...	..	...	1211	1764	388	5252	13246	486*
673	81·70	6	— 27 14 36·30	—16·380	— 0·22	...	...	...	...	1208	1763	...	5261	13265	...
674	82·42	19	+ 24 18 11·76	—16·393	— 0·28	— 0·008	—0·02	*156*	...	1207	1762	389	5263	...	487*
675	81·48	3	— 6 42 44·12	—16·551	— 0·24	— 0·005	—0·02	...	...	...	1770	...	5293	13342	...
676	84·97	2	+ 11 38 37·17	—16·610	— 0·26	...	...	...	...	...	...	...	...	...	...
677	84·24	12	— 64 32 19·31	—16·636	— 0·12	— 0·01*	—0·01	181*	230	1219	1778	394	5311	13389	490*
678	83·12	2	— 0 53 9·41	—16·651	— 0·24	...	...	...	...	...	...	...	...	...	*569*
679	82·54	25	— 3 42 17·40	—16·695	— 0·24	— 0·014	—0·03	...	...	...	1780	...	5324	13412	*570*
680	84·00	4	+ 26 32 53·71	—16·733	— 0·27	— 0·045	—0·05	...	...	...	...	...	5332	...	*572*
681	82·02	2	— 85 29 2·37	—16·771	+ 0·50	...	...	...	...	...	...	...	5346	13480	...
682	81·96	12	— 85 29 1·59	—16·783	+ 0·50	...	...	...	...	...	...	...	5351	13486	...
683	84·99	2	+ 11 30 29·36	—16·784	— 0·25	...	...	...	...	...	...	...	...	...	...
684	83·13	1	— 21 56 40·72	—16·874	— 0·21	...	...	...	..	...	...	...	...	13500	*574*
685	81·80	12	— 18 27 53·54	—16·887	— 0·22	— 0·064	—0·20	...	...	...	...	...	...	13506	*575*
686	83·22	2	— 20 42 31·35	—16·968	— 0·21	...	...	...	...	...	...	...	...	...	...
687	81·55	3	+ 9 9 12·89	—16·977	— 0·24	...	...	...	...	...	...	...	...	...	...
688	82·23	3	+ 8 51 44·49	—17·008	— 0·24	— 0·015	—0·04	...	...	...	...	...	...	...	...
689	84·22	20	— 54 1 14·00	—17·045	— 0·15	...	...	...	232	1233	1803	397	5400	13593	496
690	84·36	2	— 47·51 56·60	—17·066	— 0·17	...	...	...	...	...	1805	...	5407	13607	...
691	182·24	3	+ 8 59 4·08	—17·069	— 0·24	...	...	...	...	...	...	...	...	...	...
692	80·91	12	+ 3 56 2·05	—17·087	— 0·23	+ 0·025	+0·10	...	...	...	...	...	...	...	*578*
693	83·24	2	— 19 48 24·90	—17·093	— 0·21	...	...	...	...	...	...	...	...	13617	...
694	83·50	22	+ 8 35 44·03	—17·104	— 0·24	— 0·011	—0·02	182	...	1235	1807	398	5411	...	497*
695	83·25	1	— 21 0 42·73	—17·114	— 0·20	...	...	...	...	...	...	...	...	...	...
696	83·13	1	— 20 50 32·71	—17·168	— 0·20	...	...	...	...	...	...	...	...	...	...
697	83·22	2	— 19 7 17·61	—17·185	— 0·20	...	...	...	...	...	...	...	...	...	...
698	83·24	2	— 19 52 7·94	—17·243	— 0·20	...	...	...	...	...	...	...	...	13692	...
699	81·67	13	+ 3 45 37·67	—17·287	— 0·22	— 0·086	—0·29	...	...	...	...	...	...	...	...
700	81·52	11	— 12 30 26·84	—17·346	— 0·21	+ 0·038	+0·13	...	...	...	1820	...	5462	13743	*583*

No.	Bradley or Lacaille.	Piazzi.	B.A.C.	Star's Name.	Mag.	Mean Date. 1800+	No. of Obs.	Mean R.A. 1885·0.	Annual Precession. 1885·0.	Secular Variation. 1885·0.	Annual Proper Motion. μ_α.	Corr. for μ_α to 1885·0.
								h m s	s	s	s	s
701	1403	IX. 245	3453	30 Leonis.....η	3·6	84·00	10	10 1 3·754	+3·2792	—0·013	+0·0013	+0·001
702	1405	IX. 248	3457	31 Leonis .....A	4·6	81·70	6	10 1 48·095	+3·1953	—0·009	—0·0082	—0·027
703	1406	IX. 251	3459	32 Leonis.....α	1·4	81·95	46	10 2 14·872	+3·2184	—0·010	—0·0182	—0·056
704	4232	...	3480	Chamæleontis .....μ	6·0	83·31	22	10 3 45·196	—1·3566	—0·337	...	...
705	...	...	...	Lalande 19797.....	6·9	83·19	2	10 3 45·710	+2·8667	+0·004	...	...
706*	1412	X. 2	3473	41 Hydræ .....λ	3·9	83·22	33	10 4 58·931	+2·9382	+0·001	—0·0148	—0·026
707	...	...	...	Lalande 19840.....	7·5*	83·24	2	10 5 25·580	+2·8842	+0·003	...	...
708	...	...	...	B.D. — 17° No. 3082	8·8*	83·24	2	10 5 41·950	+2·8717	+0·004	...	...
709	...	...	...	Lalande 19846.....	7·7*	83·10	1	10 5 46·780	+2·8762	+0·004	...	...
710	...	...	...	B.D. — 17° No. 3083	9·0*	83·26	2	10 5 50·840	+2·8683	+0·004	...	...
711	1420	X. 17	3492	21 Sextantis	7½	81·50	7	10 8 24·537	+2·9909	0·000	—0·0040	—0·014
712	1425	X. 25	3508	36 Leonis .....ζ	3·5*	84·00	7	10 10 17·610	+3·3464	—0·017	0·0000	0·000
713	...	...	...	Lalande 19967	7·3*	83·25	3	10 10 42·840	+2·9014	+0·003	...	...
714	...	...	...	B.D. — 16° No. 3008	8·2*	83·15	3	10 10 52·780	+2·8943	+0·004	...	...
715†	4243	...	3516	Argûs .....ω	3·6	84·23	10	10 11 0·120	+1·4380	—0·007	...	...
716*	1428	X. 33	3517	22 Sextantis	5·4	80·94	13	10 11 55·015	+2·9925	0·000	—0·0121	—0·049
717	4249	...	3526	Carinæ .....q	3·3	84·23	11	10 13 14·548	+1·9998	+0·012	...	...
718	...	...	...	Lalande 20021.....	8·0*	84·99	2	10 13 22·280	+3·1835	—0·009	...	...
719	1432	X. 38	3523	41 Leonis (1st star) ...γ	2·0†	84·00	8	10 13 37·960	+3·2952	—0·015	+0·0208	+0·021
720	...	...	...	B.D. — 15° No. 3030	8·0*	83·26	2	10 15 2·140	+2·9054	+0·004	...	...
721	1434	X. 45	3533	34 Ursæ Majoris .....μ	3·1	82·00	7	10 15 28·480	+3·6040	—0·036	—0·0083	—0·025
722	...	...	...	B.D. — 13° No. 3101	9·6*	83·24	2	10 16 22·590	+2·9280	+0·003	...	...
723*	1443	X. 59	3551	25 Sextantis	5·9	80·62	16	10 17 37·785	+3·0371	—0·002	—0·0049	—0·021
724	...	...	...	W.B. X. 282.....	8·7*	83·12	2	10 18 24·470	+2·9391	+0·003	...	...
725	...	...	...	B.D. — 12° No. 3161	7·5*	83·24	2	10 19 48·620	+2·9502	+0·002	...	...
726	...	...	...	Lalande 20242.....	7·3*	83·26	2	10 20 13·390	+2·9469	+0·003	...	...
727*	1451	X. 74	3568	42 Hydræ .....μ	4·1	82·90	41	10 20 31·735	+2·9085	+0·004	—0·0098	—0·021
728	...	...	...	Lalande 20259.....	8·3*	83·24	2	10 20 43·230	+2·9583	+0·002	...	...
729	1448	X. 72	3572	31 Leonis Minoris	4·4	84·00	3	10 21 13·900	+3·4979	—0·030	—0·0112	—0·011
730	...	...	...	W.B. X. 345.....	9·1*	85·00	2	10 21 37·990	+3·1752	—0·008	...	...
731†	4298	X. 82	3578	Antliæ .....α	4·4	81·61	13	10 21 53·436	+2·7457	+0·010	—0·0087	—0·029
732†	4319	...	3585	Carinæ I	4·4	84·16	1	10 22 6·590	+1·2092	—0·022	...	...
733	...	...	...	Lalande 20312.....	8·7*	84·99	1	10 22 51·630	+3·1709	—0·008	...	...
734	...	...	...	Lalande 20341.....	7·8*	83·24	2	10 23 27·500	+2·9577	+0·002	...	...
735	1457	X. 86	3590	29 Sextantis	5·2	81·36	6	10 23 38·305	+3·0519	—0·002	—0·0046	—0·017

729. β Leonis Minoris in B.A.C.

No.	Mean Date. 1800+	No. of Obs.	Mean Dec. 1885·0.	Annual Precession. 1885·0.	Secular Variation. 1885·0.	Annual Proper Motion. μ_δ.	Corr. for μ_δ to 1885·0.	Fallows and Henderson.	Johnson.	Cape Catalogues. 1840.	1850.	1860.	1880.	A.G.C. 1875.	Melbourne, 1870 and 1880.
			° ′ ″	″	″	″	′								
701	84·00	10	+ 17 19 23·29	−17·413	− 0·23	+ 0·002	0·00	...	...	1243	...	400	...	...	...
702	81·86	3	+ 10 33 38·52	−17·445	− 0·22	− 0·038	−0·12	...	...	...	...	...	...	...	...
703	82·13	31	+ 12 31 43·82	−17·465	− 0·22	+ 0·018	+0·05	184*	...	1246	1829	401	5490	...	499*
704	83·55	24	− 81 39 28·29	−17·529	+ 0·10	...	...	...	...	1251	1841	403	5501	13840	502*
705	83·19	2	− 17 34 29·60	−17·529	− 0·20	...	...	...	...	...	...	...	...	13828	...
706	83·27	30	− 11 47 9·34	−17·580	− 0·20	− 0·065	−0·11	...	233	...	1836	...	5515	13855	*588*
707	83·24	2	− 16 21 55·13	−17·599	− 0·20	...	...	...	...	...	...	...	...	...	...
708	83·24	2	− 17 25 33·66	−17·611	− 0·19	...	...	...	...	...	...	...	...	...	...
709	83·10	1	− 17 4 9·54	−17·614	− 0·19	...	...	...	...	...	...	...	...	...	*589*
710	83·26	2	− 17 43 16·67	−17·616	− 0·19	...	...	...	...	...	...	...	...	...	...
711	81·50	3	− 7 25 23·11	−17·723	− 0·20	+ 0·009	+0·03	...	...	...	1846	405	5560	13936	...
712	84·00	7	+ 23 59 24·05	−17·800	− 0·22	+ 0·017	+0·02	...	...	...	...	...	...	...	...
713	83·25	3	− 15 34 11·64	−17·816	− 0·19	...	...	...	...	...	...	...	...	...	...
714	83·15	2	− 16 12 12·14	−17·823	− 0·19	...	...	...	...	...	...	...	...	...	...
715	84·26	11	− 69 28 0·91	−17·828	− 0·09	...	...	...	235	1261	1859	407	5593	14008	508
716	81·07	12	− 7 29 41·79	−17·864	− 0·19	− 0·016	−0·06	...	...	...	1860	...	5607	14031	*594*
717	84·23	11	− 60 45 27·89	−17·917	− 0·12	...	...	...	236	1268	1864	409	5617	14054	512
718	84·99	2	+ 10 29 48·19	−17·922	− 0·20	...	...	...	...	...	...	...	...	...	*595*
719*	83·45	11	+ 20 25 22·45	−17·932	− 0·21	− 0·136	−0·21	...	...	1263	1863	408	5620	...	513*
720	83·26	2	− 15 46 21·12	−17·987	− 0·18	...	...	...	...	...	...	...	...	...	...
721	81·90	14	+ 42 4 39·88	−18·004	− 0·22	+ 0·034	+0·11	...	...	1272	...	...	...	...	*597*
722	83·24	2	− 13 53 16·13	−18·038	− 0·18	...	...	...	...	...	...	...	...	...	...
723	80·44	12	− 3 29 35·40	−18·086	− 0·18	+ 0·004	+0·02	...	...	...	1876	...	5666	14163	*600*
724	83·12	2	− 13 5 6·70	−18·115	− 0·18	...	...	...	...	...	...	...	...	...	...
725	83·24	2	− 12 10 45·17	−18·167	− 0·17	...	...	...	...	...	...	...	...	...	...
726	83·26	2	− 12 32 59·57	−18·182	− 0·17	...	...	...	...	...	...	...	...	...	...
727	83·02	42	− 16 14 57·94	−18·194	− 0·17	− 0·061	−0·12	...	239	1283	1886	415	5697	14236	*602*
728	83·24	2	− 11 29 32·39	−18·201	− 0·17	...	...	...	...	...	...	...	...	...	...
729*	84·00	4	+ 37 17 46·59	−18·220	− 0·21	− 0·077	−0·08	...	...	...	...	...	...	...	...
730	85·00	2	+ 10 27 51·86	−18·234	− 0·18	...	...	...	...	...	...	...	...	...	...
731	81·61	13	− 30 28 57·09	−18·244	− 0·16	− 0·001	0·00	...	240	1284	1892	417	5714	14266	521*
732	84·16	1	− 73 26 47·21	−18·252	− 0·07	...	...	...	241	1286	1895	419	5717	14276	522
733	85·02	2	+ 10 9 12·14	−18·279	− 0·18	...	...	...	...	...	...	...	...	...	...
734	83·24	2	− 11 50 49·65	−18·300	− 0·17	...	...	...	...	...	...	...	...	...	...
735	82·21	2	− 2 9 2·38	−18·307	− 0·17	− 0·018	−0·05	...	...	...	1898	...	5728	14302	...

719. Magnitude from Struve's *Mensuræ Micrometricæ*.

No.	Bradley or Lacaille.	Piazzi.	B.A.C.	Star's Name.	Mag.	Mean Date. 1800+	No. of Obs.	Mean R.A. 1885·0.	Annual Precession. 1885·0.	Secular Variation. 1885·0.	Annual Proper Motion. μ_a.	Corr. for μ_a to 1885·0.
								h m s	s	s	s	s
736	...	...	...	W.B. X. 408.....	8·3*	83·24	1	10 24 38·620	+2·9620	+0·002	...	...
737*	1462	X. 94	3603	Bradley 1462	6·4	82·13	12	10 25 13·372	+3·0060	0·000	—0·0050	—0·014
738	...	...	...	Lalande 20416	7·0*	83·25	1	10 26 19·260	+2·9707	+0·002	...	...
739	1467	X. 102	3609	47 Leonis.....ρ	4·0	81·93	66	10 26 45·333	+3·1647	—0·008	—0·0012	—0·004
740	4351	...	...	Lacaille 4351.....	8	84·22	13	10 27 36·619	+1·8302	+0·010	...	...
741*	1471	X. 111	3620	44 Hydræ	5·4	81·84	12	10 28 32·749	+2·8503	+0·007	—0·0026	—0·008
742	4436	...	...	Lacaille 4436	8½	81·83	1	10 29 59·540	—1·5691	—0·517	...	...
743	...	...	...	W.B. X. 511.....	7·8*	83·26	2	10 30 19·410	+2·9704	+0·003	...	...
744	1474	X. 118	3632	Bradley 1474	6·6	82·05	6	10 30 39·793	+2·9291	+0·004	—0·0043	0·013
745	...	...	...	W.B. X. 520.....	6·2	83·25	1	10 30 48·830	+2·9682	+0·003	+0·0153	+0·027
746	4373	...	3635	Carinæ .....r	5·3	84·22	11	10 31 10·323	+2·2954	+0·018	...	...
747*	1479	X. 127	3646	Hydræ .....ϕ	5·2	80·38	11	10 32 58·778	+2·9277	+0·005	—0·0099	—0·046
748	...	...	...	B.D. + 9° No. 2384..	9·3*	85·00	2	10 34 23·135	+3·1541	—0·007	...	...
749*	1482	X. 134	3663	33 Sextantis	6·2	82·46	25	10 35 33·190	+3·0628	—0·002	—0·0120	—0·030
750	...	...	...	W.B. X. 620.....	7·3*	83·26	2	10 36 6·160	+3·0098	+0·001	...	...
751	...	...	...	Lalande 20659.....	7·6*	83·25	1	10 36 6·240	+3·0223	0·000	...	...
752	...	...	...	B.D. + 9° No. 2395..	9·3*	85·04	1	10 36 48·060	+3·1500	—0·007	...	...
753	1485	X. 139	3671	41 Leonis Minoris	5·1	84·24	8	10 37 9·760	+3·2808	—0·017	—0·0105	—0·008
754	4510	...	...	Lacaille 4510	6·9	82·69	31	10 37 39·767	—2·8925	—1·023	...	...
755	4440	...	3681	Lacaille 4440	5·7	84·20	2	10 38 9·395	+2·1198	+0·020	...	...
756	...	...	...	W.B. X. 657.....	9·2*	85·03	2	10 38 22·680	+3·1504	—0·007	...	...
757†	4447	...	3686	Argûs .....θ	2·9	84·23	8	10 38 51·345	+2·1306	+0·020	0·000*	0·000
758	1491	X. 147	3684	36 Sextantis	6·5*	81·42	7	10 39 13·891	+3·0973	—0·004	—0·0053	—0·019
759	1490	X. 145	3685	42 Leonis Minoris	5·4	84·22	5	10 39 28·140	+3·3521	—0·023	—0·0036	—0·003
760	4466	...	...	Lacaille 4466	7	83·29	2	10 39 58·650	+1·3816	—0·012	...	...
761	4457	...	3695	Argûs .....η	Var.	84·00	1	10 40 36·020	+2·3145	+0·022	—0·0020	—0·002
762	...	...	...	.....	10†	85·06	2	10 40 45·210	+3·1453	—0·007	...	...
763†	4461	...	3702	Argûs .....μ	2·9	84·35	13	10 41 49·460	+2·5612	+0·019	...	...
764	...	...	...	B.D. + 9° No. 2409..	9·3*	85·05	2	10 41 56·470	+3·1429	—0·007	...	...
765	...	...	...	Lalande 20821.....	8·2*	85·03	2	10 42 43·200	+3·1411	—0·007	...	...
766	1500	X. 162	3708	53 Leonis.....l	5·3	81·43	28	10 43 12·752	+3·1591	—0·008	—0·0015	—0·005
767*	1504	X. 167	3715	Hydræ .....ν	3·3	82·69	27	10 43 56·998	+2·9509	+0·005	+0·0049	+0·011
768	4509	...	3723	Chamæleontis .....δ^1	6·2	84·44	1	10 44 9·700	+0·6433	—0·093	...	...
769	...	...	...	Lalande 20861.....	7·8*	83·26	2	10 44 12·410	+3·0201	+0·001	...	...
770*	1505	X. 169	3718	41 Sextantis	5·8	81·07	13	10 44 31·919	+3·0094	+0·002	—0·0011	—0·004

741. Fundamental Star for Southern Zones.
747. ϕ^3 Hydræ in B.A.C.
744. ϕ^2 Hydræ in B.A.C.
753. B.A.C. assigns to Leo.

No.	Mean Date. 1800+	No. of Obs.	Mean Dec. 1885·0.	Annual Precession. 1885·0.	Secular Variation. 1885·0.	Annual Proper Motion. μ_δ.	Corr. for μ_δ to 1885·0.	Fallows and Henderson.	Johnson.	Cape Catalogues. 1840.	1850.	1860.	1880.	A.G.C. 1875	Melbourne. 1870 and 1880.
			° ′ ″	″	″	″	″								
736	83·24	1	− 11 32 38·35	−18·342	− 0·17	...	...	...	...	...	...	...	...	...	..
737	82·14	12	− 7 2 52·69	−18·363	− 0·17	+ 0·016	+0·05	...	...	...	1906	...	5751	14336	*606*
738	83·25	1	− 10 49 56·26	−18·401	− 0·16	...	...	...	...	...	...	...	...	..	*608*
739	82·02	45	+ 9 53 53·29	−18·416	− 0·17	+ 0·011	+0·03	...	...	1294	1909	422	5763	...	525*
740	84·22	13	− 67 6 40·80	−18·446	− 0·10	...	...	...	...	...	...	...	5776	14386	...
741*	81·85	12	− 23 9 10·02	−18·478	− 0·15	+ 0·030	+0·09	...	...	1304	1918	...	5786	14403	*611*
742	...	...	− 83 45 (33)	−18·526	+ 0·10	...	...	...	...	...	...	...	5804	14457	...
743	83·26	2	− 11 18 36·04	−18·538	− 0·16	...	...	...	...	...	...	...	...	...	*614*
744*	81·86	3	− 15 44 56·84	−18·549	− 0·16	+ 0·019	+0·06	...	...	...	1924	...	5807	14453	...
745*	83·25	1	− 11 36 47·41	−18·555	− 0·16	− 0·582	−1·02	...	...	...	...	...	...	14463	...
746	84·22	11	− 56 57 44·46	−18·566	− 0·12	...	...	...	...	1309	1925	...	5816	14478	...
747*	80·45	12	− 16 16 47·55	−18·626	− 0·15	+ 0·041	+0·19	...	244	1314	1931	...	5842	14522	*616*
748	85·00	2	+ 9 30 15·65	−18·671	− 0·16	...	...	...	...	...	...	...	...	...	...
749	82·32	23	− 1 8 13·87	−18·708	− 0·15	− 0·104	−0·28	...	...	...	1941	...	5879	14589	*620*
750	83·26	2	− 7 27 17·09	−18·724	− 0·15	...	...	...	...	...	...	...	...	...	*621*
751	83·25	1	− 5 58 26·86	−18·724	− 0·15	...	...	...	...	...	...	...	...	...	...
752	85·04	2	+ 9 16 47·48	−18·746	− 0·16	...	...	...	...	...	...	...	...	...	...
753*	84·24	8	+ 23 47 25·03	−18·758	− 0·16	+ 0·026	+0·02	...	...	...	...	...	...	...	...
754	82·82	15	− 85 29 39·24	−18·773	+ 0·16	...	...	...	...	1345	...	...	5911	14661	*625*
755	84·20	2	− 63 51 52·81	−18·788	− 0·10	...	...	...	246	1337	1951	428	5914	14653	535
756	85·03	2	+ 9 30 20·28	−18·795	− 0·15	...	...	...	...	...	...	...	...	...	...
757	84·23	8	− 63 47 31·39	−18·809	− 0·10	− 0·02*	−0·02	192*	247	1338	1952	429	5920	14667	538
758	81·60	3	+ 3 5 30·51	−18·821	− 0·15	+ 0·006	+0·02	...	...	...	...	...	...	...	...
759	84·22	5	+ 31 17 15·73	−18·828	− 0·16	− 0·017	−0·01	...	...	...	...	...	...	...	...
760	83·29	2	− 74 51 39·34	−18·843	− 0·06	...	...	...	...	...	...	...	5935	14709	...
761*	84·00	1	− 59 4 48·30	−18·862	− 0·11	− 0·004	0·00	194*	248	1343	1957	431	5938	14720	539*
762*	85·06	2	+ 9 7 59·96	−18·866	− 0·15	...	...	...	...	...	...	...	...	...	...
763	84·25	13	− 48 48 45·64	−18·898	− 0·12	...	...	195*	249	...	1964	433	5957	14751	540
764	85·05	2	+ 8 57 50·25	−18·902	− 0·14	...	...	...	...	...	...	...	...	...	...
765	85·03	2	+ 8 49 39·92	−18·924	− 0·14	...	...	...	...	...	...	...	...	...	...
766	83·05	13	+ 11 9 12·14	−18·938	− 0·14	− 0·020	−0·04	...	...	1349	...	434	5974	...	541*
767	82·69	27	− 15 35 31·62	−18·960	− 0·13	+ 0·215	+0·50	...	250	1350	1972	...	5986	14802	*629*
768	84·44	1	− 79 51 43·54	−18·966	− 0·02	− 0·06*	−0·03	...	...	1354	1978	435	5991	14817	542
769	83·26	2	− 6 52 23·26	−18·967	− 0·13	...	...	...	...	...	...	...	...	...	...
770	81·07	13	− 8 17 19·44	−18·976	− 0·14	− 0·008	−0·03	...	...	...	1974	...	5992	14816	*631*

745. Proper Motion from Bonn Observations, Vol. VII.
761. Limits of magnitude >1 —7·4 : period irregular. Proper Motion from Newcomb's Catalogue of 1098 Standard Stars.
762. Magnitude from Cape Observations.

No.	Bradley or Lacaille.	Piazzi.	B.A.C.	Star's Name.	Mag.	Mean Date. 1800+	No. of Obs.	Mean R.A. 1885·0.	Annual Precession. 1885·0.	Secular Variation. 1885·0.	Annual Proper Motion. μ_α.	Corr. for μ_α to 1885·0.
								h m s	s	s	s	s
771†	4513	...	3724	Chamæleontis .....δ^2	4·9	83·48	22	10 44 41·570	+0·6423	−0·094	...	...
772	...	...	...	B.D. + 8° No. 2423	8·3*	85·02	1	10 46 25·120	+3·1379	−0·007	...	...
773	4578	...	...	Lacaille 4578	8½	82·38	27	10 46 48·464	−3·4066	−1·408	...	...
774	1509	X. 181	3728	46 Leonis Minoris	3·9	84·21	8	10 46 52·670	+3·3642	−0·026	+0·0053	+0·004
775	...	...	...	Lalande 20945.....	8·0	83·26	2	10 47 2·470	+3·0269	+0·001	...	...
776*	1513	X. 183	3733	Hydræ .....b^2	5·2	81·07	14	10 47 51·945	+2·9257	+0·007	+0·0038	+0·015
777	1520	X. 198	3752	57 Leonis	8·0*	81·72	6	10 50 16·655	+3·0797	−0·002	+0·0005	+0·002
778	...	...	...	B.D. + 8° No. 2436	9·2*	85·02	1	10 50 39·960	+3·1335	−0·006	...	...
779	4564	...	...	Lacaille 4564	6·6	83·29	2	10 53 59·640	+1·7043	+0·010	...	...
780	1525	X. 209	3766	7 Crateris ..... α	4·1	83·82	37	10 54 10·340	+2·9516	+0·007	−0·0343	−0·040
781	1526	X. 210	3768	58 Leonis.....d	5·0	84·00	10	10 54 37·280	+3·1003	−0·004	−0·0018	−0·002
782*	1530	X. 218	3775	61 Leonis .....p^2	5·0	80·61	28	10 55 57·711	+3·0604	−0·001	+0·0002	+0·001
783	...	...	...	B.D. + 8° No. 2454	9·5*	85·05	1	10 58 31·660	+3·1250	−0·006	...	...
784	1535	X. 236	3788	63 Leonis .....χ	4·7	83·02	47	10 59 5·122	+3·1215	−0·006	−0·0255	−0·050
785	4643	...	3803	Octantis .....η	6·3	83·63	27	11 0 5·235	−0·2006	−0·311	...	...
786	...	...	...	B.D. + 8° No. 2456	9·0*	85·04	2	11 0 9·500	+3·1206	−0·005	...	...
787	4620	...	...	Lacaille 4620	7·0	83·29	1	11 1 17·010	+1·8480	+0·020	...	...
788	4603	X. 248	3804	Lacaille 4603	5¾	...	...	11 1 (58)	+2·7706	+0·020	...	...
789	1544*	X. 256	3815	Bradley 1544	5·4	82·07	6	11 3 10·162	+2·9019	+0·012	−0·0065	−0·019
790	1542	X. 253	3812	52 Ursae Majoris .....ψ	3·1	81·44	9	11 3 11·740	+3·4018	−0·037	−0·0070	−0·025
791*	1545	XI. 6	3826	11 Crateris .....β	4·4	82·34	30	11 6 0·148	+2·9450	+0·010	−0·0018	−0·005
792	1546	XI. 10	3834	68 Leonis.....δ	2·8	84·00	9	11 7 59·488	+3·1887	−0·013	+0·0102	+0·010
793	1548	XI. 13	3838	70 Leonis .....θ	3·5	84·00	13	11 8 12·272	+3·1586	−0·010	−0·0059	−0·006
794	...	...	...	B.D. + 7° No. 2427	9·4*	85·05	1	11 8 44·170	+3·1115	−0·005	...	...
795	...	...	...	B.D. + 7° No. 2429	9·1*	85·04	2	11 9 16·040	+3·1119	−0·005	...	...
796*	1551	XI. 23	3848	74 Leonis .....ϕ	4·5	81·27	12	11 10 48·955	+3·0574	+0·001	−0·0083	−0·031
797	...	...	...	B.D. + 7° No. 2434	9·5*	85·04	2	11 11 40·010	+3·1098	−0·005	...	...
798	...	...	...	Lalande 21570.....	8·5*	80·43	2	11 12 52·360	+3·1266	−0·007	...	...
799*	1557	XI. 38	3859	12 Crateris .....δ	3·9	83·45	29	11 13 35·482	+3·0046	+0·006	−0·0106	−0·016
800	...	...	...	W.B. XI. 197	9·0*	85·05	1	11 13 41·640	+3·1077	−0·005	...	...
801	1558	XI. 42	3862	77 Leonis.....σ	4·1	81·85	61	11 15 12·412	+3·1027	−0·004	−0·0071	−0·022
802	4724	...	3867	Lacaille 4724	6·6	83·29	2	11 15 28·260	+2·1400	+0·041	−0·011*	−0·019
803	...	XI. 44	3863	Piazzi XI. 44	7·5*	85·06	2	11 15 32·320	+3·1053	−0·004	...	...
804	...	XI. 48	3871	Piazzi XI. 48	7·5*	85·06	1	11 17 18·550	+3·1037	−0·004	...	...
805	...	...	...	Lalande 21685.....	8·8*	85·04	2	11 17 28·190	+3·1026	−0·004	...	...

776 b^2 Hydræ in B.A.C. and A.G.C. 782. p^1 Leonis in B.A.C. 791. Fundamental Star for Southern Zones.

No.	Mean Date. 1800+	No. of Obs.	Mean Dec. 1885·0.	Annual Precession. 1885·0.	Secular Variation. 1885·0.	Annual Proper Motion. μ_δ.	Corr. for μ_δ to 1885·0.	Fallows and Henderson.	Johnson.	Cape Catalogues. 1840.	1850.	1860.	1880.	A.G.C. 1875.	Melbourne, 1870 and 1880.
			° ′ ″	″	″	″	″								
771	83·56	21	− 79 56 0·97	−18·981	− 0·02	...	...	...	251	1355	1979	436	5994	14829	543*
772	85·03	2	+ 8 49 24·83	−19·029	− 0·14	...	...	...	...	...	...	...	...	...	*634*
773	83·25	16	− 86 17 37·07	−19·040	+ 0·16	...	...	...	...	...	...	...	6011	14883	...
774	84·21	8	+ 34 50 5·97	−19·041	− 0·15	− 0·246	−0·19	...	...	...	...	...	...	...	...
775	83·26	2	− 6 12 19·33	−19·046	− 0·13	...	...	...	...	...	...	...	...	14859	*635*
776*	80·91	11	− 19 31 10·46	−19·068	− 0·13	− 0·216	−0·88	...	...	1356	1983	...	6021	14884	*637*
777	81·47	4	+ 1 2 46·96	−19·132	− 0·13	− 0·01	−0·04	...	...	...	...	...	...	...	...
778	85·03	2	+ 8 43 22·30	−19·143	− 0·13	...	...	...	...	...	...	...	...	...	...
779	83·29	2	− 74 29 4·67	−19·227	− 0·06	...	...	...	...	1370	...	...	6071	15028	...
780	83·96	34	− 17 41 11·68	−19·232	− 0·11	+ 0·157	+0·16	196	253	1368	1995	...	6072	15027	...
781	84·00	10	+ 4 14 4·93	−19·243	− 0·12	− 0·012	−0·01	...	...	...	1996	439	6077	...	*640*
782*	80·34	22	− 1 51 56·43	−19·276	− 0·11	− 0·010	−0·05	...	...	...	2001	...	6095	15075	*642*
783	85·05	2	+ 8 26 25·15	−19·337	− 0·11	...	...	...	...	...	...	...	...	...	...
784	83·64	25	+ 7 57 27·79	−19·350	− 0·11	− 0·022	−0·03	199	...	1378	2005	442	6126	...	551*
785	83·61	29	− 83 58 30·57	−19·372	+ 0·02	...	...	...	...	1387	2015	445	6146	15189	552*
786	85·04	2	+ 7 56 43·22	−19·374	− 0·11	...	...	...	...	...	...	...	...	...	...
787	83·29	1	− 74 32 3·14	−19·399	− 0·06	...	...	...	...	...	...	...	6156	15211	...
788	84·36	1	− 42 1 4·65	−19·414	− 0·09	...	...	...	...	1384	2016	...	6169	15224	*647*
789	81·90	3	− 27 27 27·19	−19·440	− 0·10	+ 0·033	+0·10	...	255	1388	2021	...	6180	15253	...
790	82·02	16	+ 45 7 21·59	−19·441	− 0·11	− 0·036	−0·11	...	...	...	...	...	...	...	*648*
791*	82·41	27	− 22 11 53·08	−19·499	− 0·09	− 0·088	−0·23	201	256	1395	2029	...	6205	15317	*649*
792	84·00	9	+ 21 9 13·82	−19·539	− 0·10	− 0·115	−0·12	*151*	...	1398	...	448	6228	...	555*
793	84·00	13	+ 16 3 28·74	−19·543	− 0·09	− 0·063	−0·06	...	...	...	...	...	...	...	...
794	85·05	2	+ 7 30 43·97	−19·554	− 0·09	...	...	...	...	...	...	...	...	...	...
795	85·04	2	+ 7 39 45·73	−19·564	− 0·09	...	...	...	...	...	...	...	...	...	...
796	81·28	12	− 3 1 22·85	−19·593	− 0·08	− 0·024	−0·09	...	257	...	2039	451	...	15429	*652*
797	85·04	2	+ 7 36 37·69	−19·609	− 0·09	...	...	...	...	...	...	...	...	...	...
798	80·42	3	+ 11 13 31·88	−19·631	− 0·08	...	...	...	...	...	...	...	...	...	...
799	83·48	31	− 14 9 22·76	−19·644	− 0·08	+ 0·209	+0·32	*106*	258	1407	2045	452	6298	15488	557*
800	85·05	2	+ 7 29 48·55	−19·645	− 0·08	...	...	...	...	...	...	...	...	...	...
801	81·79	34	+ 6 39 34·53	−19·672	− 0·08	0·000	0·00	203	...	1410	2047	453	6312	...	*656*
802	83·29	2	− 74 30 46·94	−19·676	− 0·05	− 0·05*	−0·09	...	...	1413	2050	...	6316	15532	...
803	85·06	2	+ 7 15 53·28	−19·677	− 0·08	...	...	...	...	...	...	...	...	...	...
804	85·06	1	+ 7 13 1·27	−19·707	− 0·08	...	...	...	...	...	...	...	...	...	*657*
805	85·04	2	+ 6 58 38·28	−19·709	− 0·08	...	...	...	...	...	...	...	...	...	...

No.	Bradley or Lacaille.	Piazzi.	B.A.C.	Star's Name.	Mag.	Mean Date. 1800+	No. of Obs.	Mean R.A. 1885·0.	Annual Precession. 1885·0.	Secular Variation. 1885·0.	Annual Proper Motion. μ_a.	Corr. for μ_a to 1885·0.
								h m s	s	s	s	s
806	1560	XI. 54	3877	78 Leonis (1st star) ....ι	3·9†	84·30	17	11 17 55·715	+3·1206	—0·006	+0·0085	+0·006
807	1562	XI. 56	3879	79 Leonis	5·5	82·25	6	11 18 8·250	+3·0811	—0·002	—0·0034	—0·009
808	...	...	...	B.D. + 6° No. 2445	9·5*	85·06	1	11 18 16·610	+3·0984	—0·004	...	...
809*	1564	XI. 62	3883	15 Crateris .. ..γ	4·2	83·06	34	11 19 8·217	+2·9997	+0·008	—0·0092	—0·018
810	...	...	...	W.B. XI. 276	9·2*	85·06	2	11 19 27·260	+3·1002	—0·004	...	...
811	...	...	...	.....	10†	85·06	2	11 19 53·020	+3·1016	—0·004	...	...
812*	1569	XI. 72	3897	16 Crateris .....κ	5·8	81·07	14	11 21 21·986	+3·0258	+0·005	—0·0091	—0·036
813	1570	XI. 76	3900	84 Leonis.....τ	5·0*	84·00	12	11 22 1·375	+3·0859	—0·002	—0·0010	—0·001
814	...	...	...	B.D. + 7° No. 2451	9·5*	85·04	1	11 22 48·230	+3·0986	—0·004	...	...
815	4784	...	...	Lacaille 4784	7¾	83·03	22	11 23 41·051	+0·9505	—0·113	...	...
816*	1576	XI, 89	3916	87 Leonis .....e	5·1	81·09	15	11 24 26·374	+3·0638	+0·001	—0·0005	—0·002
817	...	XI. 98	3925	Piazzi XI. 98	6·4	82·13	6	11 26 56·818	+3·0481	+0·004	...	...
818	4782	...	...	Lacaille 4782	6·6	84·46	1	11 27 13·360	+2·6377	+0·049	...	...
819†	1580*	XI. 103	3928	Hydræ.....ξ	3·7	82·14	20	11 27 20·835	+2·9573	+0·017	—0·0166	—0·047
820	...	...	...	W.B. XI. 453	9·0*	85·04	1	11 28 9·920	+3·0937	—0·003	...	...
821†	4804	...	3941	Centauri.....λ	3·4	84·23	12	11 30 28·830	+2·7442	+0·045	0·000*	0·000
822*	1585	XI. 114	3943	21 Crateris .... θ	4·7	82·16	28	11 30 50·926	+3·0450	+0·005	—0·0058	—0·016
823	1586	XI. 116	3946	91 Leonis.....υ	4·5	83·25	24	11 31 3·641	+3·0718	0·000	—0·0018	—0·003
824†	4831	...	3957	Chamæleontis..... π	6·2	83·14	19	11 32 31·628	+2·4649	+0·069	...	...
825	...	...	...	Lalande 22079.....	8·8*	85·04	1	11 33 5·990	+3·0900	—0·003	...	...
826	...	...	...	Lalande 22102.....	6·2	82·09	6	11 34 1·883	+3·0352	+0·008	...	...
827	4865	...	...	Lacaille 4865	7½	82·76	22	11 34 48·130	+1·4447	—0·018	...	...
828	...	...	...	B.D. + 6° No. 2485...	8·7*	85·05	2	11 36 32·670	+3·0871	—0·003	...	...
829	4866	...	3972	Lacaille 4866	6·8	82·90	6	11 37 10·600	+2·5900	+0·075	...	...
830	...	...	...	B.D. + 6° No. 2490...	8·9*	85·05	2	11 38 24·580	+3·0858	—0·002	...	...
831*	1598	XI. 150	3978	27 Crateris .....ζ	4·9	82·79	50	11 38 56·033	+3·0332	+0·010	+0·0010	+0·002
832	1600	XI. 152	3981	63 Ursæ Majoris .....χ	3·9	82·01	10	11 39 58·518	+3·2038	—0·036	—0·0145	—0·043
833†	4883	...	3984	Muscæ .....λ	3·8	84·25	5	11 40 10·962	+2·8122	+0·057	...	...
834	1602	XI. 158	3989	4 Virginis .....A¹	5·2	81·32	6	11 42 0·410	+3·0888	—0·004	—0·0048	—0·018
835	1605	XI. 163	3995	94 Leonis.....β	2·2	82·50	20	11 43 11·726	+3·0990	—0·007	—0·0356	—0·089
836*	1606	XI. 166	4002	5 Virginis ... .β	3·7	82·08	54	11 44 42·128	+3·0762	0·000	+0·0481	+0·140
837*	1615	XI. 193	4035	30 Crateris .....η	5·0	80·65	21	11 50 9·343	+3·0554	+0·010	—0·0060	—0·026
838	...	...	...	B.D. + 5° No. 2562	9·0*	85·04	2	11 52 26·030	+3·0764	—0·001	...	...
839	...	XI. 205	...	Piazzi XI. 205.....	8·3*	85·05	1	11 52 36·870	+3·0762	—0·001	...	...
840†	4974	...	4048	Chamæleontis .....ε	5·0	83·66	33	11 53 55·764	+2·9113	+0·123	—0·021*	—0·028

819. B.A.C. gives no letter.
829. π^2 Chamæleontis in B.A.C.

824. π^1 Chamæleontis in B.A.C.
833. B.A.C. gives no letter.

No.	Mean Date. 1800+	No. of Obs.	Mean Dec. 1885·0.	Annual Precession. 1885·0.	Secular Variation. 1885·0.	Annual Proper Motion. μ_δ.	Corr. for μ_δ to 1885·0.	Fallows and Henderson.	Johnson.	Cape Catalogues. 1840.	1850.	1860.	1880.	A.G.C. 1875.	Melbourne, 1870 and 1880.
			° ′ ″	″	″	″	″								
806*	84·27	12	+ 11 9 46·15	−19·717	− 0·07	− 0·063	−0·05	...	...	1416	2057	455	...	...	...
807	82·24	3	+ 2 2 20·22	−19·720	− 0·07	+ 0·008	+0·02	...	...	...	...	...	..	....	...
808	85·05	2	+ 6 7 23·23	−19·722	− 0·07	...	...	...	...	...	...	...	...	...	...
809	83·09	35	− 17 3 8·94	−19·736	− 0·07	+ 0·032	+0·06	...	261	1423	2061	...	6347	15603	*659*
810	85·06	2	+ 6 44 26·59	−19·740	− 0·07	...	...	...	...	...	..	...	...	...	...
811*	85·06	2	+ 7 8 10·84	−19·747	− 0·07	...	...	...	...	...	...	...	...	...	...
812	80·87	12	− 11 43 29·66	−19·769	− 0·07	+ 0·034	+0·14	...	...	...	2067	...	6359	15649	*661*
813	84·00	12	+ 3 29 22·03	−19·779	− 0·07	− 0·006	−0·01	...	...	1433	2070	457	6367	...	*662*
814	85·04	2	+ 6 55 16·45	−19·790	− 0·06	...	...	...	...	...	...	...	...	...	...
815	83·36	25	− 84 19 19·60	−19·802	− 0·01	...	...	...	...	...	...	...	6387	15711	564*
816	80·91	13	− 2 22 8·27	−19·813	− 0·06	0·000	0·00	...	262	...	2076	458	6394	15716	*665*
817	82·05	4	− 7 11 33·46	−19·845	− 0·06	...	...	...	...	...	...	...	6418	15769	...
818	84·46	1	− 66 19 37·89	−19·849	− 0·05	...	...	...	...	...	...	...	6424	15781	566
819*	82·15	21	− 31 13 16·83	−19·850	− 0·05	− 0·025	−0·07	...	263	1445	2080	461	6425	15786	567*
820	85·04	2	+ 6 33 43·75	−19·860	− 0·05	...	...	...	...	...	...	...	...	...	...
821	84·23	12	− 62 23 0·30	−19·887	− 0·04	0·00*	0·00	209	264	1453	2089	464	6452	15848	570
822	82·14	24	− 9 9 58·69	−19·891	− 0·05	+ 0·010	+0·03	...	265	...	2090	...	6454	15851	*670*
823	83·63	16	− 0 11 19·99	−19·894	− 0·05	+ 0·047	+0·06	210	...	1456	...	465	6462	15861	571*
824*	83·14	19	− 75 15 35·27	−19·909	− 0·03	...	...	...	...	1462	...	...	6481	15898	...
825	85·04	2	+ 6 25 22·49	−19·915	− 0·04	...	...	...	...	...	...	...	...	...	...
826	81·99	4	− 13 49 52·13	−19·925	− 0·04	...	...	...	...	...	...	...	...	15931	...
827	83·16	27	− 84 50 59·14	−19·932	− 0·01	...	...	...	...	...	...	...	6513	15959	573*
828	85·05	2	+ 6 8 35·83	−19·948	− 0·04	...	...	...	...	...	...	...	...	...	...
829*	82·82	8	− 74 35 20·93	−19·954	− 0·03	...	...	...	...	1472	2104	...	6543	16018	...
830	85·05	2	+ 6 4 21·51	−19·965	− 0·03	...	...	...	...	...	...	...	...	...	...
831	82·91	42	− 17 42 40·90	−19·969	− 0·03	− 0·009	−0·02	...	266	1478	2109	...	6555	16053	*675*
832	82·23	13	+ 48 25 3·04	−19·977	− 0·03	+ 0·030	+0·08	...	...	1482	...	...	6563	...	...
833*	84·25	5	− 66 5 28·29	−19·979	− 0·03	...	...	...	...	1485	2113	...	6567	16035	576
834	82·26	3	+ 8 53 4·48	−19·992	− 0·04	+ 0·024	+0·07	...	...	...	...	...	...	...	...
835	82·61	23	+ 15 12 54·15	−20·000	− 0·02	− 0·098	−0·23	211*	...	1491	2120	470	6593	...	580*
836	82·43	42	+ 2 24 46·65	−20·009	− 0·02	− 0·262	−0·67	212*	...	1495	2124	471	6605	...	*679*
837	80·32	14	− 16 30 37·97	−20·035	− 0·01	+ 0·016	+0·07	...	...	1514	2143	...	6649	16284	*681*
838	85·04	2	+ 5 12 48·05	−20·042	− 0·01	...	...	...	...	...	...	...	...	...	...
839	85·04	2	+ 4 58 55·15	−20·043	− 0·01	...	...	...	...	...	...	...	...	...	*683*
840	83·72	34	− 77 34 52·75	−20·047	0·00	− 0·07*	−0·09	...	268	1526	2153	475	6684	16382	588

806. Magnitude from Struve's *Mensuræ Micrometricæ*.

811. Magnitude from Cape Observations.

No.	Bradley or Lacaille.	Piazzi.	B.A.C.	Star's Name.	Mag.	Mean Date. 1800+	No. of Obs.	Mean R.A. 1885·0.	Annual Precession. 1885·0.	Secular Variation. 1885·0.	Annual Proper Motion. μ_a.	Corr. for μ_a to 1885·0.
								h m s	s	s	s	s
841	...	...	...	W.B. XI. 903	8·8*	85·04	2	11 54 21·910	+3·0754	−0·001	...	...
842*	...	...	...	Lalande 22585.....	5·5	80·68	19	11 54 50·353	+3·0672	+0·007	+0·0033	+0·014
843	1618	XI. 211	4052	8 Virginis.....π	4·4	84·00	16	11 54 58·770	+3·0761	−0·002	−0·0028	−0·003
844	...	...	...	B.D. + 5° No. 2573...	9·5*	85·06	2	11 56 21·590	+3·0742	−0·001	...	...
845	...	...	...	W.B. XI. 940	9·1*	85·05	1	11 56 32·170	+3·0741	−0·001	...	...
846	4991	...	4058	Lacaille 4991	6·6	83·25	30	11 56 36·668	+2·8472	+0·293	...	...
847	...	...	...	W.B. XI. 951	8·8*	85·04	1	11 57 0·240	+3·0739	−0·001	...	...
848	...	...	...	Lalande 22678.....	7·7*	81·02	3	11 58 25·493	+3·0733	−0·001	...	...
849	1623	XI. 228	4072	9 Virginis .....o	4·3	84·00	18	11 59 21·023	+3·0730	−0·003	−0·0159	−0·016
850	...	...	...	B.D. + 4° No. 2572...	9·5*	85·05	2	11 59 50·990	+3·0725	−0·001	...	...
851*	...	XI. 230	4077	M. 499	6·4	80·64	20	12 0 6·517	+3·0724	+0·003	−0·0035	−0·015
852	5028	...	4082	Lacaille 5028	5·8	82·45	4	12 1 47·040	+3·1105	+0·114	...	...
853†	5033	...	4087	Centauri.....δ	2·8	84·22	20	12 2 24·115	+3·0891	+0·038	0·000*	0·000
854	...	...	...	Lalande 22771.....	8·7*	85·04	1	12 2 25·000	+3·0713	0·000	...	...
855	...	...	...	B.D. + 4° No. 2577...	9·2*	85·05	2	12 2 34·080	+3·0712	0·000	...	...
856	1627	XI. 249	4096	11 Virginis	5·7	82·14	6	12 4 11·817	+3·0696	−0·001	−0·0125	−0·036
857*	1626	XI. 248	4097	2 Corvi .....ϵ	3·1	82·00	26	12 4 12·670	+3·0823	+0·014	−0·0059	−0·018
858	5055	...	4103	Centauri.....ρ	4·5	84·30	9	12 5 38·688	+3·1142	+0·041	...	...
859	...	...	...	W.B. XII. 68	8·0*	85·04	1	12 6 37·470	+3·0697	0·000	...	...
860	1635	XII. 13	4114	12 Virginis	5·8	82·13	6	12 7 34·570	+3·0639	−0·003	−0·0076	−0·022
861†	5075	...	4120	Crucis .....δ	3·4	84·21	9	12 9 2·568	+3·1572	+0·053	0·000*	0·000
862*	1638	XII. 24	4124	4 Corvi .....γ	2·8	82·94	39	12 9 53·551	+3·0899	+0·011	−0·0123	−0·025
863	...	...	...	Lalande 23006.....	6·2	81·77	7	12 11 7·503	+3·0911	+0·011	...	...
864†	5085	...	4131	Chamæleontis .....β	4·6	82·68	19	12 11 37·392	+3·4106	+0·184	−0·0451	−0·105
865	...	...	...	B.D. + 3° No. 2625...	9·3*	85·04	2	12 12 11·780	+3·0684	+0·001	...	...
866*	1647	XII. 44	4145	15 Virginis .....η	4·1	82·10	70	12 14 1·351	+3·0724	+0·003	−0·0056	−0·016
867	...	...	...	B.D. + 3° No. 2632...	9·3*	85·05	1	12 14 22·420	+3·0670	+0·001	...	...
868*	...	XII 54	4157	Piazzi XII. 54.....	5·4	81·28	12	12 14 59·450	+3·0924	+0·010	−0·0015	−0·006
869	1659*	XII. 64	4173	6 Corvi	5·9	81·36	6	12 17 22·060	+3·1179	+0·016	−0·0027	−0·010
870	...	...	...	B.D. + 3° No. 2638	9·3*	85·05	2	12 17 38·000	+3·0661	+0·001	...	...
871	1664	XII. 79	4188	6 Canum Venaticûm...	5·3	84·22	8	12 20 10·870	+2·9749	−0·020	−0·0079	−0·006
872	5148	...	4187	Crucis (1st star) ...α	1½	84·00	10	12 20 12·460	+3·2983	+0·068	−0·0234	−0·023
873	...	...	...	B.D. + 3° No. 2645...	9·0*	85·04	1	12 21 6·550	+3·0653	+0·001	...	...
874†	5162	...	4197	Centauri.....σ	4·3	84·28	5	12 21 49·452	+3·2217	+0·042	...	...
875*	...	XII. 91	4200	M. 510	5·7	80·71	19	12 21 57·566	+3·0813	+0·005	−0·0059	−0·025

852. λ Chamæleontis in B.A.C.; A.G.C. assigns this star to Musca, but contains no λ Chamæleontis.
857. Fundamental Star for Southern Zones.

No.	Mean Date. 1800+	No. of Obs.	Mean Dec. 1885·0.	Annual Precession. 1885·0.	Secular Variation. 1885·0	Annual Proper Motion. μ_δ.	Corr. for μ_δ to 1885·0.	Fallows and Henderson.	Johnson.	Cape Catalogues. 1840.	1850.	1860.	1880.	A.G.C. 1875.	Melbourne, 1870 and 1880.
			° ′ ″	″	″	″	″								
841	85·04	2	+ 5 16 23·81	−20·047	0·00	...	...	...	...	...	...	...	...	...	...
842	80·30	12	− 9 47 24·16	−20·048	0·00	− 0·498	−2·34	...	...	...	...	...	...	16402	*685*
843	84·00	15	+ 7 15 19·95	−20·049	0·00	− 0·017	−0·02	...	...	1528	2154	477	6692	...	*686*
844	85·06	2	+ 4 54 52·85	−20·051	0·00	...	...	...	...	...	...	...	...	...	...
845	85·05	1	+ 4 51 37·88	−20·051	0·00	...	...	...	...	...	...	...	...	...	...
846	83·47	27	− 84 59 29·32	−20·051	0·00	...	...	...	...	1533	2157	...	6703	16438	590*
847	85·04	2	+ 4 47 11·26	−20·052	0·00	...	...	...	...	...	...	...	...	...	...
848	81·02	3	+ 5 34 22·31	−20·053	+ 0·01	...	...	...	...	...	...	...	...	...	...
849	84·00	15	+ 9 22 18·65	−20·053	+ 0·01	+ 0·049	+0·05	...	...	1540	2165	...	6736	...	...
850	85·05	2	+ 4 44 6·72	−20·053	+ 0·01	...	...	...	...	...	...	...	...	...	...
851	80·35	14	− 2 29 26·17	−20·053	+ 0·01	− 0·023	−0·11	...	...	...	2169	...	...	16517	*689*
852*	82·45	4	− 74 43 38·38	−20·053	+ 0·01	...	...	...	...	1547	2172	...	6760	16560	...
853	84·22	20	− 50 4 54·46	−20·053	+ 0·01	− 0·01*	−0·01	217*	270	1551	2176	481	6766	16572	595*
854	85·04	2	+ 4 17 53·48	−20·053	+ 0·01	...	...	...	...	...	...	...	...	...	...
855	85·05	2	+ 4 31 54·07	−20·052	+ 0·01	...	...	...	...	...	...	...	...	...	...
856	82·28	5	+ 6 26 47·42	−20·050	+ 0·02	+ 0·039	+0·11	...	...	...	...	...	...	...	...
857*	82·18	28	− 21 58 48·24	−20·050	+ 0·02	+ 0·021	+0·06	...	272	1558	2184	484	6778	16615	598*
858	84·30	9	− 51 43 40·50	−20·047	+ 0·02	...	...	...	273	1563	2188	...	6793	16652	599
859	85·04	2	+ 4 2 34·85	−20·045	+ 0·02	...	...	...	...	...	...	...	...	...	...
860	82·28	3	+ 10 54 7·88	−20·042	+ 0·02	− 0·004	−0·01	...	...	1567	...	...	...	...	...
861	84·21	9	− 58 6 32·91	−20·038	+ 0·03	− 0·05*	−0·04	218*	274	1573	...	485	6824	16726	601
862	82·94	39	− 16 54 11·85	−20·035	+ 0·03	+ 0·034	+0·07	219*	275	1577	2196	...	6828	16744	*696*
863	82·32	3	− 16 3 16·46	−20·030	+ 0·03	...	...	...	...	...	...	...	...	16752	...
864*	82·89	23	− 78 40 25·10	−20·028	+ 0·03	+ 0·043	+0·09	220*	276	1581	...	486	6836	16766	603*
865	85·04	2	+ 3 13 28·26	−20·025	+ 0·03	...	...	...	...	...	...	...	...	...	...
866	82·58	46	− 0 1 39·31	−20·016	+ 0·04	− 0·022	−0·05	...	...	1588	2205	488	6852	...	605*
867	85·05	2	+ 3 41 58·18	−20·014	+ 0·04	...	...	...	...	...	...	...	...	...	...
868	81·20	12	− 12 55 39·69	−20·011	+ 0·04	+ 0·020	+0·08	...	...	...	2211	...	...	16830	*699*
869	82·25	1	− 24 12 7·37	−19·996	+ 0·04	− 0·016	−0·04	...	...	...	2221	...	6885	16887	...
870	85·05	2	+ 3 29 28·06	−19·994	+ 0·04	...	...	...	...	...	...	...	...	...	...
871	84·22	8	+ 39 39 26·02	−19·976	+ 0·05	− 0·023	−0·02	...	...	...	...	...	...	...	...
872*	84·00	11	− 62 27 40·97	−19·976	+ 0·05	− 0·041	−0·04	223*	279	1601	2229	489	6908	16942	611*
873	85·04	2	+ 3 18 32·26	−19·969	+ 0·05	...	...	...	...	...	...	...	...	...	...
874	84·28	5	− 49 35 36·54	−19·963	+ 0·05	...	...	...	280	1609	2233	...	6922	16976	613
875	80·33	12	− 3 58 43·92	−19·961	+ 0·05	− 0·031	−0·14	...	...	...	2235	...	...	16984	*704*

864, 872. Proper Motion from Newcomb's Catalogue of 1098 Standard Stars.

No.	Bradley or Lacaille.	Piazzi.	B.A.C.	Star's Name.	Mag.	Mean Date. 1800+	No. of Obs.	Mean R.A. 1885·0.	Annual Precession. 1885·0.	Secular Variation. 1885·0.	Annual Proper Motion. μ_α.	Corr. for μ_α to 1885·0.
								h m s	s	s	s	s
876*	1675	XII. 101	4211	7 Corvi (2nd Star)... δ	3·0*	82·64	36	12 23 54·873	+ 3·1120	+ 0·012	—0·0154	—0·036
877	1676	XII. 102	4212	20 Comæ	5·7	84·00	2	12 23 56·520	+ 3·0174	— 0·008	+0·0033	+0·003
878†	5180	...	4215	Crucis.....γ	2·0	84·27	9	12 24 47·508	+ 3·2903	+ 0·054	0·000*	0·000
879†	5184	...	4224	Muscæ .....γ	4·0	84·27	4	12 25 36·720	+ 3·5180	+ 0·118	...	...
880	...	XII. 111	4225	Piazzi XII. 111.....	6·5	81·37	6	12 25 43·940	+ 3·0840	+ 0·006	...	...
881	...	...	...	B.D. + 3° No. 2663...	9·5*	85·05	2	12 27 1·010	+ 3·0640	+ 0·002	...	...
882*	1685	XII. 123	4234	9 Corvi .....β	2·8	82·55	27	12 28 20·804	+ 3·1416	+ 0·016	—0·0021	—0·005
883	...	XII. 127	4238	Piazzi XII. 127	7·1*	81·43	6	12 28 39·850	+ 3·0479	— 0·001	...	...
884	1688	XII. 133	4242	24 Comæ (2nd star) ...	4·7†	84·00	11	12 29 21·598	+ 3·0135	— 0·006	—0·0009	—0·001
885	5213	...	4245	Muscæ.....α	2·9	84·24	6	12 30 20·150	+ 3·5203	+ 0·101	...	...
886	5222	...	4251	Centauri .....τ	4·4	84·32	11	12 31 25·000	+ 3·2747	+ 0·041	...	...
887	5225	XII. 140	4253	Lacaille 5225	5·5	81·37	13	12 31 36·418	+ 3·1640	+ 0·019	...	...
888	5221	...	...	Lacaille 5221	6·7	82·45	3	12 31 53·020	+ 3·7519	+ 0·160	...	...
889*	1694	XII. 146	4257	26 Virginis.....χ	4·7	80·92	14	12 33 18·695	+ 3·0974	+ 0·008	—0·0069	—0·028
890†	5243	...	4264	Centauri .....γ	2·4	84·21	16	12 35 10·680	+ 3·3021	+ 0·042	...	...
891	1698	XII. 157	4268	29 Virginis (1st star) γ	3·0†	84·00	2	12 35 50·000	+ 3·0754	+ 0·004	—0·0385	—0·039
892	1701	XII. 160	4271	30 Virginis.....ρ	5·1	82·36	6	12 36 3·830	+ 3·0322	— 0·002	+0·0033	+0·009
893	5235	...	...	Lacaille 5235	7½	83·23	22	12 36 12·115	+17·5491	+21·17	—0·088*	—0·156
894†	5267	...	4280	Muscæ .....β	3·4	84·32	16	12 39 14·245	+ 3·6219	+ 0·100	...	...
895	1704	XII. 172	4286	32 Virginis.....d^2	5·4	82·32	6	12 39 48·500	+ 3·0387	0·000	—0·0094	—0·025
896†	5277	...	4289	Crucis.....β	1·7	84·26	12	12 41 0·434	+ 3·4694	+ 0·066	—0·009*	—0·007
897*	...	XII. 183	4294	M. 522	6·1	80·33	14	12 41 36·830	+ 3·0964	+ 0·007	—0·0020	—0·009
898	5268	...	4293	Octantis .....t	6·0	83·20	21	12 43 0·480	+ 5·6606	+ 0·821	...	...
899	...	XII. 196	4312	Piazzi XII. 196	6·7	82·39	6	12 45 23·770	+ 3·1174	+ 0·009	...	...
900	1715	XII. 200	4315	31 Comæ	5·0	84·18	8	12 46 5·760	+ 2·9294	— 0·010	—0·0027	—0·002
901*	1721	XII. 214	4330	40 Virginis .....ψ	5·0	80·90	15	12 48 22·415	+ 3·1163	+ 0·009	—0·0035	—0·014
902*	1723	XII. 223	4340	43 Virginis .....δ	3·7	82·09	82	12 49 48·721	+ 3·0521	+ 0·003	—0·0336	—0·098
903	1725	XII. 226	4346	12 Canum Venaticûm...	3·2†	82·78	18	12 50 38·872	+ 2·8356	— 0·015	—0·0220	—0·049
904	1729	XII. 237	4352	44 Virginis.....k	5·9	81·44	6	12 53 44·100	+ 3·0897	+ 0·007	—0·0036	—0·013
905†	5349	...	4353	Muscæ.....δ	3·7	84·30	15	12 54 22·531	+ 3·9811	+ 0·138	+0·042*	+0·029
906	5325	...	...	Lacaille 5325	7¼	83·19	24	12 55 10·327	+ 9·0366	+ 2·652	...	...
907	1735	XII. 249	4367	47 Virginis .....ε	3·0	82·46	48	12 56 27·169	+ 3·0056	— 0·001	—0·0192	—0·049
908*	...	...	...	Lalande 24277.....	5·6	80·82	19	12 57 36·571	+ 3·1932	+ 0·016	+0·0085	+0·036
909	...	...	...	Lalande 24306.....	8·0*	81·08	3	12 58 44·777	+ 3·0731	+ 0·005	...	...
910	...	XII. 262	4382	Piazzi XII. 262	8	81·42	8	13 0 22·930	+ 3·1612	+ 0·013	...	...

882. Fundamental Star for Southern Zones.

903. α Canum Venaticûm in B.A.C.

No.	Mean Date. 1800+	No. of Obs.	Mean Dec. 1885·0.	Annual Precession. 1885·0.	Secular Variation. 1885·0.	Annual Proper Motion. μ_δ.	Corr. for μ_δ to 1885·0.	Fallows and Henderson.	Johnson.	Cape Catalogues. 1840.	1850.	1860.	1880.	A.G.C. 1875.	Melbourne. 1870 and 1880.
			° ′ ″	″	″	″	″								
876	82·67	36	− 15 52 29·88	−19·944	+ 0·05	− 0·146	−0·34	224*	281	...	2240	...	6943	17030	*706*
877	84·00	2	+ 21 31 58·92	−19·944	+ 0·05	− 0·017	−0·02	...	...	...	...	...	...	...	...
878	84·27	9	− 56 28 8·39	−19·936	+ 0·06	− 0·30*	−0·22	225*	282	1612	...	...	6947	17048	616
879	84·27	4	− 71 29 51·04	−19·928	+ 0·07	...	...	...	283	1616	2245	...	6958	17072	617
880	81·43	1	− 4 25 3·74	−19·927	+ 0·06	...	...	...	...	...	...	...	...	17077	...
881	85·05	2	+ 3 3 0·02	−19·915	+ 0·06	...	...	...	...	...	...	...	...	...	...
882*	82·64	30	− 22 45 37·75	−19·900	+ 0·06	− 0·052	−0·12	227*	285	1620	2249	493	6982	17129	618*
883	82·32	2	+ 8 22 13·51	−19·897	+ 0·06	...	...	...	...	...	...	...	...	...	...
884*	84·00	11	+ 19 0 37·19	−19·889	+ 0·06	+ 0·031	+0·03	...	...	...	...	...	...	...	...
885	84·24	6	− 68 30 6·11	−19·878	+ 0·08	...	...	...	286	1623	2254	...	6992	17156	620
886	84·31	10	− 47 54 28·30	−19·866	+ 0·07	...	...	...	287	1624	2256	...	6998	17180	622
887	81·52	14	− 26 30 10·16	−19·863	+ 0·07	...	...	...	...	1626	2258	...	7000	17185	623
888	82·45	3	− 74 44 15·63	−19·860	+ 0·08	...	...	...	...	1625	...	...	7002	17191	...
889	81·09	12	− 7 21 44·76	−19·842	+ 0·07	− 0·021	−0·08	...	...	...	2261	498	...	17223	*710*
890	84·21	16	− 48 19 40·75	−19·818	+ 0·08	...	...	229*	288	1633	2266	...	7022	17269	628
891*	84·00	2	− 0 49 4·22	−19·809	+ 0·08	+ 0·015	+0·02	230	289	1637	2268	499	7027	17291	629*
892	82·35	3	+ 10 52 10·89	−19·806	+ 0·08	− 0·088	−0·23	...	...	...	...	...	7030	...	...
893	83·17	25	− 89 10 4·53	−19·804	+ 0·41	0·00*	0·00	...	...	...	2253	497	7017	17241	*711*
894	84·32	16	− 67 28 41·36	−19·760	+ 0·10	...	...	..	290	1646	2278	505	7053	17374	634
895	82·30	3	+ 8 18 8·94	−19·752	+ 0·08	+ 0·003	+0·01	...	...	...	...	...	...	...	...
896	84·26	12	− 59 3 34·74	−19·733	+ 0·10	− 0·03*	−0·02	231*	291	1650	...	506	7062	17411	635
897	80·33	14	− 5 40 19·66	−19·724	+ 0·09	− 0·029	−0·14	...	...	...	2282	...	...	17422	*716*
898	83·53	25	− 84 29 53·91	−19·702	+ 0·16	...	...	...	...	1652	2281	507	7073	17440	637*
899	82·41	3	− 9 42 40·46	−19·661	+ 0·10	...	...	...	...	1660	2290	...	...	17485	...
900	84·18	8	+ 28 10 0·33	−19·649	+ 0·09	− 0·018	−0·01	...	...	...	...	...	7094	...	...
901	80·97	12	− 8 54 50·37	−19·609	+ 0·10	− 0·017	−0·07	...	...	1674	2301	513	...	17557	*721*
902	82·41	49	+ 4 1 21·69	−19·582	+ 0·10	− 0·047	−0·12	...	...	1679	2307	514	7123	...	*722*
903*	82·76	21	+ 38 56 23·19	−19·566	+ 0·10	+ 0·066	+0·15	*167*	...	1682	...	515	7132	...	647*
904	82·30	2	− 3 11 28·67	−19·505	+ 0·11	+ 0·010	+0·03	...	...	...	2311	516	...	17683	*724*
905	84·29	16	− 70 55 41·48	−19·492	+ 0·14	0·00*	0·00	...	294	1684	2312	517	7160	17693	649
906	83·56	21	− 86 56 27·62	−19·475	+ 0·32	...	...	...	...	...	...	...	7167	17696	*725*
907	82·51	35	+ 11 34 39·28	−19·448	+ 0·12	+ 0·029	+0·07	...	...	...	...	...	7178	...	*727*
908	80·46	12	− 19 57 56·03	−19·424	+ 0·12	+ 0·027	+0·12	...	...	...	...	...	...	17763	*728*
909	81·08	3	− 0 6 37·32	−19·399	+ 0·12	...	...	...	...	...	...	...	...	...	...
910	82·03	3	− 14 18 1·47	−19·362	+ 0·13	...	...	...	...	1698	2331	...	...	17833	...

882. Suspected variable.

884, 891, 903. Magnitude from Struve's *Mensuræ Micrometricæ*.

No.	Bradley or Lacaille.	Piazzi.	B.A.C.	Star's Name.	Mag.	Mean Date. 1800+	No. of Obs.	Mean R.A. 1885·0.	Annual Precession. 1885·0.	Secular Variation. 1885·0.	Annual Proper Motion. μ_α.	Corr. for μ_α to 1885·0.
								h m s	s	s	s	s
911	...	XII. 274	...	Piazzi XII. 274	7½	82·41	2	13 2 28·710	+3·2214	+0·018	...	...
912	1744	XII. 276	4395	45 Hydræ .....ψ	5·1	81·05	11	13 2 51·684	+3·2224	+0·018	—0·0042	—0·017
913*	1747	XII. 281	4401	51 Virginis .....θ	4·4	82·44	50	13 3 59·759	+3·1042	+0·008	—0·0043	—0·011
914	5406	...	4398	Lacaille 5406	6·3	83·77	32	13 4 45·537	+4·8019	+0·287	—0·004*	—0·005
915*	1752	XIII. 9	4418	53 Virginis	5·1	81·12	12	13 5 56·370	+3·1781	+0·014	+0·0039	+0·015
916	1755	XIII. 15	4421	43 Comæ	4·4	84·00	8	13 6 30·400	+2·8651	—0·008	—0·0605	—0·061
917	1754	XIII. 17	4428	54 Virginis	6¾	81·43	7	13 7 18·030	+3·1997	+0·016	—0·0059	—0·021
918†	5466	XIII. 31	4437	Centauri .....r	5·7	80·67	13	13 10 29·965	+3·3146	+0·025	...	...
919	1761	XIII. 38	4442	58 Virginis	6·9	81·44	6	13 11 25·730	+3·1443	+0·011	—0·0075	—0·027
920	1765	XIII. 48	4451	20 Canum Venaticûm...	4·7	80·00	6	13 12 23·110	+2·7091	—0·013	—0·0129	—0·065
921*	1764	XIII. 45	4450	46 Hydræ .....γ	3·4	83·18	45	13 12 40·233	+3·2456	+0·019	+0·0031	+0·006
922†	5491	XIII. 53	4458	Centauri .....t	3·0	84·28	8	13 14 8·070	+3·3823	+0·331	...	...
923	1768	...	4462	Bradley 1768	7·3*	81·43	7	13 14 45·320	+3·0317	+0·003	—0·003	—0·011
924	5452	...	4460	Lacaille 5452	7·0	81·36	1	13 17 36·470	+8·3925	+1·509	...	...
925	1773	XIII. 73	4478	66 Virginis	5·8	81·45	9	13 18 33·980	+3·1083	+0·008	+0·0087	+0·031
926*	1774	XIII. 75	4480	67 Virginis .....α	1·2	83·00	52	13 19 8·111	+3·1568	+0·012	—0·0044	—0·009
927	5482	...	4483	Octantis .....κ	5·7	83·36	40	13 22 31·471	+8·6731	+1·550	—0·052*	—0·085
928	1780	XIII. 90	4499	70 Virginis	5·2	82·20	3	13 22 48·360	+2·9511	0·000	—0·0180	—0·050
929*	1782	XIII. 101	4508	72 Virginis	6·1	80·72	19	13 24 25·746	+3·1220	+0·009	+0·0009	+0·004
930*	1783	XIII. 111	4514	73 Virginis	6·0	81·04	13	13 25 50·802	+3·2326	+0·016	—0·0091	—0·036
931	1786	XIII. 118	4521	76 Virginis .....h	5·5	81·49	7	13 26 54·660	+3·1559	+0·011	—0·0044	—0·015
932*	1789	XIII. 128	4532	79 Virginis .....ζ	3·5	81·84	70	13 28 50·053	+3·0725	+0·007	—0·0205	—0·065
933	...	XIII. 136	4536	Piazzi XIII. 136.....	5·0	84·00	8	13 29 39·700	+2·6773	—0·009	+0·0043	+0·004
934	1793	XIII. 142	4546	81 Virginis	7·0*	81·45	6	13 31 33·740	+3·1389	+0·010	—0·0030	—0·011
935†	5618	...	4549	Centauri .....ε	2·6	84·33	26	13 32 36·392	+3·7669	+0·059	0·000*	0·000
936	...	...	4559	Lalande 25224.....	5·6	82·20	3	13 33 54·380	+2·9657	+0·002	...	...
937*	1796	XIII. 162	4565	82 Virginis.....m	5·3	82·24	39	13 35 34·611	+3·1497	+0·011	—0·0085	—0·023
938	1805	XIII. 186	4585	86 Virginis	6·0	81·44	12	13 39 47·710	+3·1908	+0·013	—0·0028	—0·010
939	5633	...	...	Lacaille 5633	6·6	83·14	25	13 41 3·801	+7·1824	+0·720	...	...
940	1810	XIII. 199	4597	4 Boötis .....r	4·5	84·00	15	13 41 47·851	+2·8854	—0·001	—0·0346	—0·035
941	5683	XIII. 197	4601	Centauri.....ν	3·7	84·35	8	13 42 36·570	+3·5776	+0·038	...	...
942†	5684	XIII. 198	4602	Centauri.....μ	3·4	84·45	4	13 42 41·400	+3·5921	+0·039	+0·001*	+0·001
943	1815	XIII. 209	4607	85 Ursæ Majoris .....η	2·0	80·62	13	13 43 0·521	+2·3828	—0·010	—0·0115	—0·050
944*	1811	XIII. 204	4608	89 Virginis	5·2	82·05	34	13 43 37·438	+3·2572	+0·016	—0·0087	—0·026
945	...	...	...	Lalande 25485.....	6·4*	82·20	3	13 44 38·240	+3·0097	+0·004	...	...

916. β Comæ in B.A.C.
921. Fundamental Star for Southern Zones.

918. B.A.C. gives no letter.
929. l^1 Virginis in B.A.C.

No.	Mean Date. 1800+	No. of Obs.	Mean Dec. 1885·0.	Annual Precession. 1885·0.	Secular Variation. 1885·0.	Annual Proper Motion. μ_δ.	Corr. for μ_δ to 1885·0.	Fallows and Henderson.	Johnson.	Cape Catalogues. 1840.	1850.	1860.	1880.	A.G.C. 1875.	Melbourne, 1870 and 1880.
			° ′ ″	″	″	″	″								
911	82·41	2	− 22 29 25·79	−19·313	+ 0·13	...	...	...	...	...	...	...	...	17881	...
912	81·13	11	− 22 30 9·49	−19·304	+ 0·13	− 0·040	−0·15	234	296	1703	2337	524	7224	17889	...
913	82·56	34	− 4 55 28·86	−19·277	+ 0·13	− 0·037	−0·09	...	297	1707	2341	525	7228	17912	655*
914	83·71	35	− 77 50 10·15	−19·258	+ 0·20	− 0·08*	−0·10	...	...	1705	...	...	7233	17922	...
915	81·12	12	− 15 34 39·07	−19·230	+ 0·14	− 0·279	−1·08	...	298	1715	2350	527	...	17955	*732*
916*	84·00	8	+ 28 27 40·12	−19·215	+ 0·13	+ 0·897	+0·90	...	...	1721	...	...	...	...	...
917	81·44	1	− 18 12 49·09	−19·195	+ 0·14	− 0·005	−0·02	...	...	...	2355	...	...	17987	...
918*	80·67	13	− 30 53 49·15	−19·112	+ 0·15	...	...	...	...	1728	2362	...	7280	18060	...
919	82·00	3	− 9 56 23·51	−19·087	+ 0·15	+ 0·032	+0·10	...	...	...	2366	530	...	18088	...
920	80·91	11	+ 41 10 42·64	−19·062	+ 0·13	+ 0·021	+0·09	...	...	...	...	...	...	...	...
921*	83·18	45	− 22 33 51·75	−19·054	+ 0·15	− 0·033	−0·06	...	...	...	2368	...	...	18121	*735*
922	84·28	8	− 36 6 18·71	−19·013	+ 0·16	...	...	235*	301	1732	2371	...	7306	18149	668
923	81·95	3	+ 5 25 50·62	−18·996	+ 0·15	+ 0·020	−0·06	...	...	...	...	...	...	...	...
924	...	...	− 85 13 (43)	−18·915	+ 0·41	...	...	...	...	...	2373	531	7336	18212	669
925	82·00	3	− 4 33 45·44	−18·887	+ 0·16	− 0·022	−0·07	...	...	...	2384	534	...	18255	...
926	83·14	65	− 10 33 38·43	−18·870	+ 0·16	− 0·018	−0·03	237*	302	1742	2386	535	7352	18262	672*
927	83·67	31	− 85 11 43·51	−18·767	+ 0·45	− 0·05*	−0·07	...	...	1741	2388	536	7387	18321	673*
928	82·20	3	+ 14 23 37·80	−18·759	+ 0·16	− 0·569	−1·59	...	...	...	...	...	...	...	...
929*	80·39	13	− 5 52 34·85	−18·709	+ 0·17	+ 0·021	+0·10	...	...	...	2401	539	...	18379	*740*
930	81·04	13	− 18 8 8·32	−18·663	+ 0·18	− 0·007	−0·03	...	...	1751	2404	...	...	18413	*741*
931	81·44	1	− 9 34 18·97	−18·629	+ 0·18	− 0·023	−0·08	...	...	...	2410	543	...	18445	...
932	82·51	35	− 0 0 26·89	−18·566	+ 0·18	+ 0·056	+0·14	...	...	1760	2416	545	7441	...	681*
933	84·00	8	+ 37 46 19·36	−18·538	+ 0·16	− 0·007	−0·01	...	...	...	...	...	...	...	...
934*	81·46	3	− 7 17 5·84	−18·474	+ 0·18	− 0·04	−0·14	...	...	...	2423	546	...	18535-6	...
935	84·33	26	− 52 52 51·67	−18·439	+ 0·22	− 0·02*	−0·01	239*	305	1771	...	547	7478	18559	683
936	82·20	3	+ 11 19 51·46	−18·394	+ 0·18	...	...	...	...	...	...	...	...	...	...
937	82·52	29	− 8 7 20·07	−18·335	+ 0·19	+ 0·046	+0·11	...	...	1777	2432	548	7506	18613	*746*
938	82·37	3	− 11 50 58·92	−18·182	+ 0·20	+ 0·013	+0·03	...	...	1784	2445	552	...	18711	*748*
939	83·49	24	− 82 5 42·58	−18·135	+ 0·46	...	...	...	...	...	...	...	7546	18722	...
940	84·00	15	+ 18 1 49·53	−18·108	+ 0·19	+ 0·040	+0·04	...	...	...	...	...	7553	...	*749*
941	84·35	8	− 41 6 50·36	−18·077	+ 0·23	...	...	...	307	1791	2453	...	7562	18772	689
942	84·45	4	− 41 54 0·49	−18·073	+ 0·23	0·00*	0·00	...	308	1792	2454	554	7563	18773	691
943	80·80	15	+ 49 53 18·64	−18·061	+ 0·16	− 0·014	−0·06	...	...	...	...	556	...	...	*750*
944	82·14	27	− 17 33 38·45	−18·038	+ 0·21	− 0·033	−0·09	...	...	1794	2456	557	...	18793	*751*
945	82·20	3	+ 6 4 6·68	−17·999	+ 0·20	...	...	...	...	...	...	...	...	...	...

934. Double, 8½ and 8¼ magnitude.

No.	Bradley or Lacaille.	Piazzi.	B.A.C.	Star's Name.	Mag.	Mean Date. 1800+	No. of Obs.	Mean R.A. 1885·0.	Annual Precession. 1885·0.	Secular Variation. 1885·0.	Annual Proper Motion. μ_a.	Corr. for μ_a to 1885·0.
								h m s	s	s	s	s
946†	5737	XIII. 231	4638	Centauri .....ζ	2·7	84·31	25	13 48 22·174	+ 3·7190	+ 0·047	—0·008*	—0·006
947*	1819	XIII. 237	4645	90 Virginis .....p	5·3	80·82	17	13 48 47·848	+ 3·0824	+ 0·008	—0·0068	—0·028
948	1821	XIII. 240	4648	8 Boötis .....η	2·9	83·92	12	13 49 12·512	+ 2·8615	— 0·001	—0·0049	—0·005
949†	5768	XIII. 246	4653	Centauri .....φ	4·1	84·25	2	13 51 17·000	+ 3·6252	+ 0·039	...	...
950	5770	XIII. 249	4654	Centauri .....v^1	4·2	84·43	9	13 51 34·758	+ 3·6816	+ 0·043	...	...
951	...	...	...	W.B. XIII. 856	8·4*	80·43	4	13 51 37·330	+ 3·1868	+ 0·012	...	...
952*	1825*	XIII. 253	4657	47 Hydræ	5·1	81·12	18	13 52 4·057	+ 3·3574	+ 0·021	—0·0050	—0·019
953	5766	...	4655	Lacaille 5766	7·0	81·16	3	13 52 9·250	+ 4·2024	+ 0·089	...	...
954	...	...	...	A.G.C. 19011	7¾	82·74	13	13 53 50·423	+ 4·1626	+ 0·084	...	...
955	5757	...	4660	Apodis .....θ	Var.	84·26	6	13 54 9·283	+ 5·6811	+ 0·295	...	...
956	5784	...	4669	Centauri .....β	1·2	82·72	41	13 55 42·954	+ 4·1843	+ 0·084	—0·0103	—0·023
957*	1829	XIII. 275	4672	93 Virginis .....τ	4·4	82·16	65	13 55 47·640	+ 3·0487	+ 0·007	—0·0005	—0·001
958	1830	XIII. 282	4675	11 Boötis	6·1	84·00	2	13 55 57·640	+ 2·7287	— 0·003	—0·0069	—0·007
959†	1832*	XIII. 295	4685	49 Hydræ .....π	3·5	82·57	20	13 59 49·383	+ 3·3998	+ 0·023	+0·0019	+0·005
960†	1831*	XIII. 293	4686	5 Centauri.....θ	2·2	84·30	8	13 59 55·050	+ 3·5543	+ 0·032	—0·0442	—0·031
961	1834	XIII. 299	4690	95 Virginis	5·7	81·47	6	14 0 37·920	+ 3·1759	+ 0·012	—0·0122	—0·043
962	5815	...	...	Lacaille 5815	6·6	81·15	4	14 0 50·350	+ 4·1800	+ 0·080	...	...
963	...	...	...	Lalande 25912.....	7·0*	82·20	3	14 1 57·100	+ 3·0666	+ 0·007	...	...
964	...	...	...	Lalande 25914.....	8·5*	82·21	3	14 2 3·900	+ 3·1222	+ 0·009	...	...
965	...	...	...	W.B. XIII. 1072.....	8·2*	82·22	3	14 2 13·010	+ 3·0783	+ 0·008	...	...
966	1835	XIII. 311	4698	96 Virginis	6·9	81·48	6	14 2 52·970	+ 3·1902	+ 0·012	—0·0007	—0·002
967	...	...	...	B.D. — 10° No. 3836	9·3*	80·48	2	14 3 58·540	+ 3·2036	+ 0·013	..	...
968	...	...	...	A.G C. 19098	8½	82·61	21	14 3 58·554	+37·3579	+29·74	...	...
969	...	...	...	W.B. XIV. 33	9·1	80·48	2	14 4 30·880	+ 3·2079	+ 0·013	...	...
970*	...	XIII. 317	4700	40 H Virginis	5·3	81·45	12	14 4 33·680	+ 3·2676	+ 0·016	+0·0005	+0·002
971	...	XIV. 2	4702	Piazzi XIV. 2	8¼	80·47	3	14 4 57·740	+ 3·2123	+ 0·013	...	...
972	...	...	...	Lalande 25991..	8·0*	82·21	3	14 5 1·820	+ 3·0982	+ 0·009	...	...
973	1839	XIV. 8	4706	12 Boötis.....d	4·8	84·00	8	14 5 9·210	+ 2·7392	— 0·002	—0·0020	—0·002
974	...	...	...	W.B. XIV. 46	9·0*	80·49	2	14 5 25·340	+ 3·2120	+ 0·013	...	...
975	...	...	...	B.D. — 11° No. 3687	9·2*	80·50	2	14 6 24·280	+ 3·2139	+ 0·013	...	...
976*	1842	XIV. 14	4716	98 Virginis ..... .κ	4·3	81·87	53	14 6 45·684	+ 3·1929	+ 0·012	—0·0004	—0·001
977	1843	XIV. 19	4720	Bradley 1843	6·7	82·20	3	14 8 22·020	+ 3·1397	+ 0·010	—0·0217	—0·061
978	5802	...	4705	Octantis.....δ	4·7	83·54	30	14 8 36·643	+ 8·9850	+ 1·024	—0·053*	—0·077
979*	1846	XIV. 28	4727	99 Virginis .....ι	4·2	82·00	28	14 9 59·036	+ 3·1409	+ 0·010	—0·0031	—0·009
980	1847	XIV. 32	4729	16 Boötis .....α	0·0	82·12	33	14 10 25·179	+ 2·8133	0·000	—0·0799	—0·230

952 Fundamental Star for Southern Zones.
956. The separate observations are printed with those of α^1 and α^2 Centauri in Appendix II.

No.	Mean Date. 1800+	No. of Obs.	Mean Dec. 1885·0.	Annual Precession. 1885·0.	Secular Variation. 1885·0.	Annual Proper Motion. μ_δ.	Corr. for μ_δ to 1885·0.	Fallows and Henderson.	Johnson.	Cape Catalogues. 1840.	1850.	1860.	1880.	A.G.C 1875.	Melbourne, 1870 and 1880.
			° ′ ″	″	″	″	″								
946	84·31	26	− 46 43 17·37	−17·853	+ 0·25	− 0·05*	−0·03	240*	312	1808	2474	558	7623	18897	695
947	80·58	12	− 0 56 12·04	−17·836	+ 0·21	− 0·012	−0·05	...	...	1812	2479	...	...	18910	*754*
948	84·00	11	+ 18 58 29·65	−17·819	+ 0·20	− 0·344	−0·34	149	...	1813	2481	559	7638	...	697*
949	84·25	2	− 41 32 17·46	−17·735	+ 0·25	...	...	...	313	1815	2484	...	7655	18960	699
950	84·43	9	− 44 14 29·67	−17·724	+ 0·26	...	...	...	314	1816	2485	...	7661	18968	700
951	80·43	4	− 10 21 45·06	−17·722	+ 0·22	...	...	...	...	...	...	...	...	...	...
952*	81·27	11	− 24 24 36·62	−17·704	+ 0·23	− 0·030	−0·11	...	...	...	2487	...	7669	18981	*756*
953	81·16	5	− 60 55 12·60	−17·700	+ 0·30	...	...	...	...	...	2486	...	7670	18979	...
954	82·68	12	− 59 41 57·88	−17·630	+ 0·30	...	...	...	...	...	...	...	...	19011	...
955	84·26	6	− 76 14 26·69	−17·617	+ 0·40	...	...	...	...	...	2489	560	7679	19014	702*
956*	83·63	66	− 59 49 2·20	−17·551	+ 0·30	− 0·053	−0·07	243*	315	1818	2496	562	7691	19043	703*
957	82·44	43	+ 2 6 5·71	−17·548	+ 0·22	− 0·033	−0·08	...	...	...	...	563	7692	...	704*
958	84·00	2	+ 27 56 32·49	−17·540	+ 0·20	+ 0·018	+0·02	...	...	...	...	...	...	...	...
959	82·57	20	− 26 7 39·13	−17·375	+ 0·25	− 0·170	−0·41	...	318	1825	2507	...	7718	19128	...
960	84·30	8	− 35 48 12·19	−17·370	+ 0·27	− 0·613	−0·43	245*	317	1826	2508	565	7719	19129	712
961	82·11	3	− 8 45 51·93	−17·339	+ 0·24	+ 0·015	+0·04	...	...	...	2511	...	...	19152	...
962	81·16	5	− 58 43 42·68	−17·330	+ 0·31	...	...	...	...	...	...	...	7728	19155	...
963	82·20	3	+ 0 29 30·38	−17·281	+ 0·23	...	...	...	...	...	...	...	...	...	...
964	82·21	3	− 4 11 52·96	−17·275	+ 0·24	...	...	...	...	...	...	...	...	...	...
965	82·22	3	− 0 30 1·02	−17·269	+ 0·24	...	...	...	...	...	...	...	...	...	...
966	81·54	1	− 9 47 20·09	−17·239	+ 0·24	+ 0·019	+0·07	...	...	...	2516	...	...	19191	...
967	80·48	2	− 10 47 39·88	−17·191	+ 0·25	...	...	...	...	...	...	...	...	...	...
968	83·22	17	− 88 50 59·71	−17·191	+ 2·81	...	...	...	...	...	...	...	7731	19098	*764*
969	80·48	2	− 11 5 37·59	−17·166	+ 0·25	...	...	...	...	...	...	...	...	...	...
970	81·45	12	− 15 45 29·16	−17·163	+ 0·25	− 0·005	−0·02	...	...	...	2517	566	...	19222	*765*
971	80·47	3	− 11 24 29·09	−17·145	+ 0·25	...	...	...	...	...	2518	...	...	19233	...
972	82·21	3	− 2 7 53·55	−17·143	+ 0·24	...	...	...	...	...	...	...	...	...	...
973	84·00	8	+ 25 38 13·35	−17·137	+ 0·21	− 0·081	−0·08	...	...	...	...	...	...	...	...
974	80·49	2	− 11 20 59·42	−17·125	+ 0·25	...	...	...	...	...	...	...	...	...	...
975	80·50	2	− 11 25 11·29	−17·080	+ 0·25	...	...	...	...	...	...	...	...	...	...
976	82·40	30	− 9 44 16·44	−17·063	+ 0·25	+ 0·141	+0·37	...	321	1843	2528	568	7771	19272	*766*
977	82·20	3	− 5 24 44·25	−16·989	+ 0·25	+ 0·09	+0·25	...	...	...	2531	...	...	19301	...
978	83·70	29	− 83 8 20·95	−16·979	+ 0·70	− 0·02*	−0·03	*11*	319	1836	2521	567	7780	19284	718*
979	82·60	25	− 5 27 3·44	−16·914	+ 0·25	− 0·417	−1·00	...	322	1847	2533	...	...	19324	*768*
980	83·17	53	+ 19 46 56·79	−16·894	+ 0·23	− 1·977	−3·62	150	...	1848	2534	571	7795	...	722*

955. Limits of magnitude 5½–6½ in *Uranometria Argentina*.

956. Proper Motion from Newcomb's Catalogue of 1098 Standard Stars.

No.	Bradley or Lacaille.	Piazzi.	B.A.C.	Star's Name.	Mag.	Mean Date. 1800+	No. of Obs.	Mean R.A. 1885·0.	Annual Precession. 1885·0.	Secular Variation. 1885·0.	Annual Proper Motion. μ_α.	Corr. for μ_α to 1885·0.
								h m s	s	s	s	s
981	1852	XIV. 41	4741	19 Boötis.....λ	4·3	81·30	10	14 12 0·721	+ 2·3019	—0·005	—0·0191	—0·071
982†	5881	XIV. 33	4734	Lupi.....ι	3·8	84·38	8	14 12 2·766	+ 3·8143	+0·045	...	...
983	1850	XIV. 37	4743	100 Virginis.....λ	4·6	83·57	26	14 12 53·232	+ 3·2394	+0·014	—0·0025	—0·004
984	...	...	...	W.B. XIV. 238	7·0*	82·20	3	14 15 24·080	+ 3·2016	+0·013	...	...
985	1858	XIV. 59	4762	103 Virginis	6·7	81·44	6	14 16 2·990	+ 3·0915	+0·009	—0·0073	—0·026
986*	1860	XIV. 64	4765	2 Libræ	6·3	80·42	13	14 17 14·360	+ 3·2214	+0·013	—0·0031	—0·014
987	...	...	...	A.G.C. 19504	7¾	82·75	13	14 18 22·834	+ 4·3996	+0·087	...	...
988	...	XIV. 73	4773	Piazzi XIV. 73	5·1	81·47	6	14 18 27·980	+ 2·9880	+0·005	...	...
989	5928	XIV. 66	4768	Lupi .....τ¹	5·3	84·44	5	14 18 45·508	+ 3·8253	+0·044	...	...
990	1864	XIV. 86	4785	22 Boötis .....f	5·4	84·00	11	14 21 6·350	+ 2·7953	+0·001	—0·0057	—0·006
991	...	XIV. 85	4787	Piazzi XIV. 85	6·8	82·20	3	14 21 31·250	+ 3·2489	+0·014	...	...
992*	1865	XIV. 90	4792	105 Virginis.....φ	4·9	81·67	87	14 22 16·673	+ 3·0956	+0·009	—0·0102	—0·034
993	...	...	...	Lalande 26492.....	6·3*	81·48	6	14 25 0·070	+ 2·9993	+0·006	...	...
994	...	...	...	A.G.C. 19668	8	82·84	12	14 25 14·987	+ 4·4600	+0·088	...	...
995	5973	...	...	Lacaille 5973	7·0	82·79	15	14 26 42·582	+ 4·4286	+0·084	..	...
996	1869	XIV. 112	4808	25 Boötis.....ρ	3·6	82·55	20	14 26 52·460	+ 2·5945	—0·002	—0·0085	—0·021
997	1871	XIV. 117	4812	27 Boötis.....γ	3·1	84·00	7	14 27 26·840	+ 2·4273	—0·003	—0·0106	—0·011
998	...	...	...	Lalande 26543.....	7·2*	82·20	3	14 27 42·370	+ 3·3075	+0·016	...	...
999†	5993	XIV. 109	4811	Centauri.....η	2·5	84·33	7	14 28 12·480	+ 3·7890	+0·039	...	...
1000*	...	XIV. 116	4814	M. 575	6·4	81·64	12	14 28 22·480	+ 3·3648	+0·018	+0·0014	+0·005
1001	5997	...	...	Lacaille 5997	6·9	83·00	12	14 30 28·320	+ 4·4114	+0·080	...	...
1002	6017	...	4832	Centauri .....a^2	1	82·96	31	14 31 48·732	+ 4·5172	+0·088	—0·4795	—0·978
1003	6014	...	4831	Centauri .....a^1	3½	81·42	8	14 31 49·256	+ 4·5176	+0·088	—0·4795	—1·717
1004	...	XIV. 137	4837	Piazzi XIV. 137	6·9	82·14	6	14 32 49·547	+ 3·2190	+0·013	...	...
1005	5823	...	4790	Octantis.....z	6·8	82·95	30	14 33 2·075	+23·4738	+8·255	—0·160*	—0·328
1006	6012	...	4835	Circini .....α	3½	84·41	8	14 33 13·495	+ 4·8078	+0·112	...	...
1007†	5980	...	4833	Apodis .....α	4·0	84·19	1	14 33 37·800	+ 7·1751	+0·431	...	...
1008	6023	...	...	Lacaille 6023	8	83·33	12	14 34 6·443	+ 4·6198	+0·095	...	...
1009†	6034	...	4839	Lupi .....α	2·6	84·29	10	14 34 17·083	+ 3·9629	+0·047	...	...
1010	...	...	...	Lalande 26719.....	7·3*	82·20	3	14 34 57·180	+ 3·3676	+0·018	...	...
1011	1875	XIV. 147	4847	29 Boötis (1st star) ...π	4·9†	84·00	2	14 35 19·360	+ 2·8175	+0·002	—0·0008	—0·001
1012	...	...	...	Lalande 26730.....	8·0*	82·21	3	14 35 22·650	+ 3·3477	+0·017	...	...
1013	1876	XIV. 152	4849	30 Boötis.....ζ	3·8	84·31	1	14 35 39·480	+ 2·8596	+0·003	+0·0019	+0·001
1014	...	...	...	A.G.C. 19913	7¼	82·72	15	14 36 4·901	+ 4·5929	+0·091	...	...
1015*	1880	XIV. 158	4855	107 Virginis.....μ	3·9	81·71	55	14 36 59·974	+ 3·1488	+0·010	+0·0056	+0·018

985. v^2 Virginis in B.A.C.
1002, 1003. a^2 is now the first star. The separate observations are printed, with those of β Centauri, in Appendix II.
1005. The letter having been in use for many years at the Cape is retained.

No.	Mean Date. 1800+	No. of Obs.	Mean Dec. 1885·0.	Annual Precession. 1885·0.	Secular Variation. 1885·0.	Annual Proper Motion. μ_δ.	Corr. for μ_δ to 1885·0.	Fallows and Henderson.	Johnson.	Cape Catalogues. 1840.	1850.	1860.	1880.	A.G.C. 1875.	Melbourne, 1870 and 1880.
			° ′ ″	″	″	″	″								
981	81·50	12	+ 46 37 2·01	−16·817	+ 0·19	+ 0·151	+0·53	...	...	...	...	...	...	...	...
982	84·40	9	− 45 31 35·34	−16·816	+ 0·31	...	...	...	323	1850	2536	...	7806	19354	723
983	84·16	21	− 12 50 27·65	−16·776	+ 0·27	+ 0·029	+0·02	246	324	1853	2540	573	7815	19372	...
984	82·20	3	− 9 50 35·86	−16·654	+ 0·27	...	...	...	...	...	...	...	...	...	...
985*	82·15	3	− 1 27 42·94	−16·624	+ 0·26	− 0·007	−0·02	...	...	1864	2552	...	...	19449	...
986	80·42	13	− 11 11 16·83	−16·565	+ 0·27	− 0·059	−0·27	...	...	...	2556	...	...	19475	*772*
987	82·75	13	− 60 13 56·19	−16·507	+ 0·37	...	...	...	...	...	...	...	...	19504	...
988	82·15	3	+ 6 20 33·07	−16·503	+ 0·25	...	...	...	...	...	...	...	...	...	...
989	84·44	5	− 44 42 1·94	−16·489	+ 0·32	...	...	...	328	1867	2559	574	7864	19514	729
990	84·00	11	+ 19 44 40·28	−16·372	+ 0·24	+ 0·029	+0·03	...	...	...	...	...	7882	...	*774*
991	82·20	3	− 12 50 29·47	−16·350	+ 0·28	...	...	...	...	...	2570	...	...	19579	...
992	82·51	40	− 1 42 42·48	−16·311	+ 0·27	− 0·002	0·00	....	330	...	2573	...	...	19591	*775*
993	82·15	3	+ 5 17 3·84	−16·172	+ 0·27	...	...	...	...	...	...	...	...	..	...
994	82·84	12	− 60 17 31·41	−16·159	+ 0·39	...	...	...	...	...	...	...	...	19668	...
995	82·60	17	− 59 30 30·04	−16·083	+ 0·39	...	...	...	...	...	...	...	7923	19703	...
996	82·55	20	+ 30 52 36·02	−16·075	+ 0·23	+ 0·125	+0·31	...	...	...	...	577	7928	...	734*
997	84·00	7	+ 38 48 43·22	−16·044	+ 0·22	+ 0·153	+0·15	...	...	1888	...	...	...	...	...
998	82·20	3	− 16 18 45·95	−16·031	+ 0·30	...	...	...	...	...	...	...	...	...	...
999	84·33	7	− 41 39 6·54	−16·004	+ 0·34	...	...	248*	332	1887	2584	578	7935	19737	736*
1000	82·34	12	− 19 56 2·76	−15·996	+ 0·30	+ 0·011	+0·03	...	...	1889	2586	...	...	19744	*782*
1001	82·97	13	− 58 38 15·63	−15·884	+ 0·40	...	...	...	...	...	...	...	7955	19796	...
1002*	82·83	104	− 60 21 32·50	−15·811	+ 0·41	+ 0·789	+1·71	249*	336	1899	2595	580	7964	19825	741*
1003*	82·17	31	− 60 21 42·67	−15·810	+ 0·41	+ 0·789	+2·23	...	335	1898	2594	579	7965	19826	742*
1004	82·46	3	− 10 3 26·58	−15·758	+ 0·30	...	...	...	...	...	2599	...	...	19845	...
1005*	83·45	25	− 87 40 35·75	−15·747	+ 2·13	− 0·05*	−0·08	*6*	327	1869	2571	576	7960	19776	737*
1006	84·41	8	− 64 28 23·76	−15·736	+ 0·44	...	...	...	...	1901	2597	...	7975	19849	744
1007	84·19	1	− 78 33 17·94	−15·714	+ 0·66	...	...	...	334	1896	2596	...	7979	19851	743
1008	83·33	12	− 61 42 48·42	−15·688	+ 0·43	...	...	...	...	...	...	...	7985	19866	...
1009	84·29	10	− 46 53 36·69	−15·678	+ 0·37	...	...	250*	337	1904	2601	...	7986	19873	745
1010	82·20	3	− 19 26 0·56	−15·642	+ 0·31	...	...	...	..	...	...	...	...	...	*788*
1011*	84·00	2	+ 16 54 42·97	−15·622	+ 0·26	− 0·006	−0·01	...	...	...	...	...	..	...	...
1012	82·21	3	− 18 10 34·88	−15·619	+ 0·31	...	...	...	...	...	...	...	...	...	*789*
1013	84·31	1	+ 14 13 19·17	−15·604	+ 0·27	− 0·010	−0·01	...	...	...	...	...	...	...	...
1014	82·54	17	− 61 1 54·59	−15·580	+ 0·43	...	...	...	...	...	...	...	...	19913	...
1015	82·20	26	− 5 9 26·22	−15·529	+ 0·29	− 0·305	−0·85	...	340	1912	2610	...	8013	19941	*791*

1002, 1003. The Proper Motion given is for the centre of gravity, and is taken from Elkin's *Ueber die Parallaxe von α Centauri.*
1011. Magnitude from Strnve's *Mensuræ Micrometricæ.*

No.	Bradley or Lacaille.	Piazzi.	B.A.C.	Star's Name.	Mag.	Mean Date. 1800+	No. of Obs.	Mean R.A. 1885·0.	Annual Precession. 1885·0.	Secular Variation. 1885·0.	Annual Proper Motion. μ_α.	Corr. for μ_α to 1885·0.
								h m s	s	s	s	s
1016	...	...	...	A.G.C. 19959	8	83·18	12	14 38 6·650	+4·5689	+0·088	...	...
1017	...	XIV. 166	4867	Piazzi XIV. 166	6·8	82·20	3	14 39 39·610	+3·3963	+0·019	...	...
1018	...	...	...	Lalande 26875.....	7·8*	82·21	3	14 39 54·390	+3·4180	+0·019	..	...
1019	1890	XIV. 175	4876	36 Boötis (2nd star) ...ε	3·0†	84·00	6	14 39 57·800	+2·6240	0·000	—0·0043	—0·004
1020*	1889	XIV. 174	4878	109 Virginis	3·7	82·16	33	14 40 26·114	+3·0366	+0·007	—0·0090	—0·026
1021	6091	...	...	Lacaille 6091	7·4	82·55	2	14 42 34·990	+4·6088	+0·088	...	...
1022	...	...	...	Lalande 26968.....	8¾	82·27	4	14 43 17·100	+3·4568	+0·021	...	...
1023	1892*	XIV. 184	4891	58 Hydræ	5·0	81·48	6	14 43 32·270	+3·5275	+0·023	—0·0195	—0·069
1024	...	..	...	A.G.C. 20107	7¾	83·18	10	14 44 6·002	+4·6152	+0·087	...	...
1025	6114	XIV. 185	4892	Lupi .....o	5·0	84·31	5	14 44 8·094	+3·8937	+0·040	...	...
1026	1893	XIV. 186	4894	8 Libræ	5·3	82·68	12	14 44 19·588	+3·3164	+0·016	—0·0098	—0·023
1027*	1894	XIV. 187	4895	9 Libræ .....α	3·0	82·76	33	14 44 31·016	+3·3173	+0·016	—0·0093	—0·021
1028	...	...	...	.....	8½†	82·22	3	14 44 33·880	+3·4709	+0·021	...	...
1029	...	...	...	Lalande 27003.....	7·½	82·20	3	14 44 36·720	+3·4528	+0·020	...	...
1030	...	...	4883	Octantis .....π^2	5·9	83·87	30	14 44 52·536	+9·8329	+0·936	...	...
1031	...	...	...	A.G.C. 20144	8	82·30	3	14 45 56·630	+3·4850	+0·021	...	...
1032	...	...	...	C.Z. XIV. 2965	8½	82·22	3	14 47 12·730	+3·5121	+0·022	...	...
1033	1899*	XIV. 199	4913	12 Libræ	5·7	81·50	6	14 47 39·430	+3·4732	+0·021	—0·0014	—0·005
1034†	6146	XIV. 204	4916	Lacaille 6146	5·8	84·56	2	14 48 41·350	+3·6640	+0·028	...	...
1035	...	...	...	C.Z. XIV. 3136	9	82·43	3	14 50 3·660	+3·5698	+0·024	...	...
1036	...	...	...	.....	8½†	82·49	3	14 50 5·120	+3·5395	+0·023	...	...
1037	6162	...	...	Lacaille 6162	6·3	82·20	3	14 50 21·980	+3·5676	+0·024	...	...
1038*	1903	XIV. 214	4922	15 Libræ	5·8	80·91	16	14 50 31·684	+3·2475	+0·013	—0·0019	—0·008
1039	...	...	...	Lalande 27179...	8·2*	80·41	3	14 50 34·980	+3·3295	+0·016	...	...
1040	...	...	...	C.Z. XIV. 3171	9	82·22	3	14 50 39·450	+3·5459	+0·023	...	...
1041	...	...	...	Lalande 27189.....	8·2*	80·46	3	14 50 42·850	+3·3331	+0·016	...	...
1042	...	XIV. 221	4926	Piazzi XIV. 221	5·7	83·96	12	14 50 47·524	+2·8310	+0·004	—0·0014	—0·001
1043†	6160	XIV. 211	4924	Lupi .....β	2·8	84·36	12	14 51 0·125	+3·9089	+0·039	—0·008*	—0·005
1044	...	...	...	C.Z. XIV. 3201	9·0	82·24	1	14 51 3·410	+3·5706	+0·024	...	...
1045	...	...	...	Lalande 27206.....	8·7*	80·46	3	14 51 14·240	+3·3320	+0·016	...	...
1046	...	...	...	C.Z. XIV. 3235	8½	82·50	4	14 51 28·430	+3·5559	+0·024	...	...
1047	6170	XIV. 216	4928	Centauri.....κ	3·3	84·35	2	14 51 40·870	+3·8819	+0·037	0·000*	0·000
1048	...	...	...	C.Z. XIV. 3318	9	82·30	3	14 52 51·120	+3·6001	+0·025	...	...
1049	...	...	...	A.G.C. 20324	9	82·21	3	14 52 57·670	+3·5990	+0·025	...	...
1050	...	...	...	C.Z. XIV. 3417	9¼	82·23	3	14 54 15·220	+3·5867	+0·024	...	...

1030. B.A.C. gives no letter.

1038. ξ^2 Libræ in B.A.C.

No.	Mean Date. 1800+	No. of Obs.	Mean Dec. 1885·0	Annual Precession. 1885·0.	Secular Variation. 1885·0.	Annual Proper Motion. μ_δ.	Corr. for μ_δ to 1885·0.	Fallows and Henderson.	Johnson.	Cape Catalogues. 1840.	1850.	1860.	1880.	A.G.C. 1875.	Melbourne. 1870 and 1880.
			° ′ ″	″	″	″	″								
1016	83·18	12	— 60 22 46·50	—15·468	+ 0·43	...	...	...	...	...	...	...	...	19959	...
1017	82·20	3	— 20 41 14·09	—15·382	+ 0·32	...	...	...	...	...	2617	...	...	20010	*794*
1018	82·21	3	— 21 55 4·55	—15·367	+ 0·33	...	...	...	...	...	...	...	...	...	...
1019*	84·00	6	+ 27 33 35·13	—15·363	+ 0·25	+ 0·001	0·00	*158*	...	1925	2621	583	8039	...	750*
1020	82·37	26	+ 2 22 41·56	—15·337	+ 0·29	— 0·026	—0·07	...	...	1927	...	...	...	...	*796*
1021	82·55	2	— 60 27 24·23	—15·216	+ 0·44	...	...	...	...	...	...	...	8063	20072	...
1022	82·27	4	— 23 44 28·11	—15·175	+ 0·34	...	...	...	...	...	...	.	...	20093	...
1023	81·54	2	— 27 28 50·16	—15·161	+ 0·34	— 0·056	—0·19	...	341	1939	2632	...	8074	20100	...
1024	83·26	9	— 60 22 8·79	—15·129	+ 0·45	...	...	...	...	...	...	...	8076	20107	...
1025	84·28	5	— 43 5 54·05	—15·127	+ 0·38	...	...	...	342	1940	2633	...	8078	20109	754
1026	82·68	12	— 15 31 5·59	—15·115	+ 0·32	— 0·090	—0·21	*104*	...	1942	2634	...	...	20117	755*
1027	82·76	33	— 15 33 47·18	—15·105	+ 0·32	— 0·072	—0·16	251*	343	1943	2635	588	8084	20119	756*
1028*	82·22	3	— 24 22 29·31	—15·101	+ 0·34	...	...	...	...	...	...	...	...	...	...
1029	82·20	3	— 23 22 56·33	—15·099	+ 0·34	...	...	...	...	...	...	...	...	20123	*800*
1030*	83·83	31	— 82 34 28·94	—15·084	+ 0·95	...	...	...	...	...	2626	587	8083	20104	752*
1031	82·30	3	— 24 58 38·93	—15·022	+ 0·34	...	...	...	...	...	...	...	...	20144	...
1032	82·22	3	— 26 15 40·16	—14·949	+ 0·35	...	...	...	...	...	...	...	...	...	...
1033	82·15	3	— 24 10 16·08	—14·923	+ 0·34	— 0·037	—0·11	...	...	1951	2646	590	8116	20184	...
1034	84·56	2	— 33 23 15·99	—14·862	+ 0·36	...	...	...	...	1954	2649	591	8121	20203	...
1035	82·43	4	— 28 50 1·29	—14·781	+ 0·36	...	...	...	...	...	...	...	...	...	...
1036*	82·49	3	— 27 20 11·30	—14·779	+ 0·36	...	...	...	...	...	...	...	...	...	...
1037	82·20	3	— 28 41 30·06	—14·763	+ 0·36	...	...	...	...	...	...	...	8136	20247	...
1038*	80·81	12	— 10 56 41·50	—14·755	+ 0·32	+ 0·006	+0·03	...	345	1964	2653	...	8137	20249	*803*
1039	80·41	3	— 15 50 47·66	—14·750	+ 0·33	...	...	...	...	...	...	...	...	...	...
1040	82·22	3	— 27 35 30·04	—14·746	+ 0·36	...	...	...	...	...	...	...	...	...	...
1041	80·46	3	— 16 3 0·81	—14·742	+ 0·33	...	...	...	...	...	...	...	...	...	...
1042	84·00	11	+ 14 54 42·05	—14·738	+ 0·29	+ 0·020	+0·02	...	...	...	...	...	...	...	...
1043	84·34	11	— 42 40 10·67	—14·726	+ 0·39	— 0·03*	—0·02	*64*	344	1963	2654	593	8143	20263	762
1044	82·24	1	— 28 45 51·05	—14·724	+ 0·36	...	...	...	...	...	...	...	...	...	...
1045	80·46	3	— 15 56 49·85	—14·714	+ 0·33	...	...	...	...	...	...	...	...	...	...
1046	82·50	4	— 27 59 37·20	—14·696	+ 0·36	...	...	...	...	...	...	...	...	...	...
1047	84·35	2	— 41 38 30·41	—14·685	+ 0·39	0·00*	0·00	*65*	346	1966	2657	594	8152	20286	764
1048	82·30	3	— 29 57 29·77	—14·614	+ 0·36	...	...	...	...	...	...	...	...	...	...
1049	82·21	3	— 29 53 54·37	—14·608	+ 0·36	...	...	...	...	...	...	...	...	20324	...
1050	82·23	3	— 29 10 16·77	—14·530	+ 0·36	...	...	...	...	...	...	...	...	...	...

1019. Magnitude from Struve's *Mensuræ Micrometricæ.*

1028, 1036. Magnitude from Cape Observations.

No.	Bradley or Lacaille.	Piazzi.	B.A.C.	Star's Name.	Mag.	Mean Date. 1800+	No. of Obs.	Mean R.A. 1885·0.	Annual Precession. 1885·0.	Secular Variation. 1885·0.	Annual Proper Motion. μ_α.	Corr. for μ_α to 1885·0.
								h m s	s	s	s	s
1051*	1911	XIV. 238	4939	19 Libræ .....δ	Var.	81·48	12	14 54 49·703	+ 3·2032	+ 0·011	—0·0064	—0·023
1052	...	...	...	B.D.—16° No. 3986...	8·6*	80·43	2	14 54 58·190	+ 3·3450	+ 0·016	...	...
1053	...	...	...	B.D.—16° No. 3987...	8·9*	80·45	3	14 55 3·370	+ 3·3477	+ 0·016	...	...
1054	...	XIV. 246	4947	Piazzi XIV. 246	8	80·48	3	14 56 38·720	+ 3·3604	+ 0·016	...	...
1055	1915	XIV. 253	4951	110 Virginis	4·6	81·45	6	14 57 5·420	+ 3·0309	+ 0·007	—0·0050	—0·018
1056†	6201	XIV. 242	4948	Lupi .....π	4·3	84·38	25	14 57 17·460	+ 4·0602	+ 0·045	0·000*	0·000
1057*	1913*	XIV. 251	4950	1 H. Scorpii .....γ	3·3	82·51	20	14 57 20·400	+ 3·5047	+ 0·021	—0·0070	—0·017
1058	...	...	...	C.Z. XIV. 3620.....	8¾	82·20	3	14 57 32·390	+ 3·6018	+ 0·024	...	...
1059	1918	XIV. 259	4958	42 Boötis.. .....β	3·6	82·33	6	14 57 36·797	+ 2·2636	0·000	—0·0048	—0·013
1060	1922	XIV. 270	4969	43 Boötis .....ψ	4·5	84·00	3	14 59 31·030	+ 2·5835	+ 0·001	—0·0145	—0·015
1061	1919	XIV. 267	4970	21 Libræ .....ν	5·4	81·45	8	15 0 12·750	+ 3·3403	+ 0·015	—0·0052	—0·018
1062	6246	...	4986	Lupi .....κ	4½	84·38	21	15 3 56·552	+ 4·1515	+ 0·048	—0·012*	—0·007
1063†	6245	...	4987	Lupi .....ζ	3·6	84·50	6	15 4 1·680	+ 4·2886	+ 0·055	...	...
1064*	1927	XV. 3	4995	24 Libræ .....ι	4·9	80·90	18	15 5 40·014	+ 3·4126	+ 0·017	—0·0037	—0·015
1065	...	...	...	B.D.—13° No. 4105...	8·6*	80·47	3	15 6 31·820	+ 3·3019	+ 0·014	...	...
1066	...	...	...	Lalande 27713.....	7·5*	80·48	3	15 7 25·960	+ 3·3082	+ 0·014	...	...
1067	...	...	...	Lalande 27729.....	7·0*	80·50	3	15 7 57·040	+ 3·3121	+ 0·014	...	...
1068†	6255	...	5005	Trianguli Aust.....γ	3·1	84·42	5	15 8 11·244	+ 5·5254	+ 0·140	—0·018*	—0·010
1069	1932	XV. 20	5024	3 Serpentis	5·4	82·68	12	15 9 28·335	+ 2·9800	+ 0·007	—0·0020	—0·005
1070*	1934	XV. 26	5034	27 Libræ .....β	2·7	82·34	70	15 10 49·147	+ 3·2283	+ 0·012	—0·0079	—0·021
1071	1931*	XV. 22	5032	2 Lupi .....f	4·7	82·22	12	15 10 50·076	+ 3·6371	+ 0·024	—0·0025	—0·007
1072	6303	XV. 23	5035	Lacaille 6303	6·2	84·59	4	15 11 24·050	+ 3·9149	+ 0·034	...	...
1073	6290	...	...	Lacaille 6290	7½	...	...	15 12 (17)	+ 5·2849	+ 0·116	...	...
1074	1937	XV. 33	5047	5 Serpentis	5·1	81·50	6	15 13 26·460	+ 3·0340	+ 0·008	+0·0238	+0·083
1075†	6326	XV. 31	5046	Lupi .....δ	3·7	84·29	3	15 13 49·600	+ 3·9189	+ 0·034	...	...
1076	6333	XV. 35	5056	Lupi .....ε	3¾	84·44	12	15 14 52·470	+ 4·0519	+ 0·039	...	...
1077	6216	...	5037	Octantis..... .....ρ	5·9	83·55	33	15 16 56·116	+12·8342	+ 1·387	+0·070*	+0·102
1078*	1945	XV. 58	5073	8 Serpentis	6·1	81·28	13	15 17 47·995	+ 3·0832	+ 0·008	+0·0044	+0·016
1079	...	...	...	B.D.—17° No. 4330...	8·7*	80·44	3	15 19 50·330	+ 3·3970	+ 0·016	...	...
1080	...	...	...	B.D.—17° No. 4331...	9·7*	80·50	3	15 19 50·460	+ 3·4002	+ 0·016	...	...
1081	1950	XV. 73	5084	51 Boötis.....μ	4·4	84·00	4	15 20 8·760	+ 2·2781	+ 0·002	—0·0143	—0·014
1082	...	...	...	B.D.—17° No. 4335...	9·1*	80·44	3	15 20 15·350	+ 3·3975	+ 0·015	...	...
1083	1948	XV. 69	5085	9 Serpentis .....τ¹	5·5	84·38	13	15 20 27·373	+ 2·7815	+ 0·004	—0·0039	—0·002
1084	...	...	...	B.D.—17° No. 4337...	9·4*	80·59	3	15 20 40·940	+ 3·3999	+ 0·015	...	...
1085	...	...	...	.....	10†	80·51	1	15 21 10·350	+ 3·4012	+ 0·015	...	...

1057. Fundamental Star for Southern Zones : 20 Libræ in B.A.C. : σ Libræ in A.G.C.
1061. ν^1 Libræ in B.A.C.
1064. ι^1 Libræ in B.A.C.
1071. δ Lupi in Auwers' Bradley : *f* Lupi in A.G.C. : No. 1075 is named δ Lupi in B.A.C., A.G.C., and *Monthly Notices*, Vol. xlvii.

No.	Mean Date. 1800+	No. of Obs.	Mean Dec. 1885·0.	Annual Precession. 1885·0.	Secular Variation. 1885·0.	Annual Proper Motion. μ_δ.	Corr. for μ_δ to 1885·0.	Fallows and Henderson.	Johnson.	Cape Catalogues. 1840.	1850.	1860.	1880.	A.G.C. 1875.	Melbourne, 1870 and 1880.
			° ′ ″	″	″	″	″								
1051*	82·19	12	− 8 3 42·51	−14·496	+ 0·33	− 0·009	−0·03	...	347	1971	2662	...	...	20363	*804*
1052	80·43	2	− 16 25 47·65	−14·488	+ 0·34	...	...	...	...	...	...	...	...	...	...
1053	80·45	3	− 16 34 37·00	−14·483	+ 0·34	...	...	...	...	...	...	...	...	...	...
1054	80·48	3	− 17 10 42·66	−14·386	+ 0·35	...	...	...	...	...	2667	596	...	20416	...
1055	82·72	5	+ 2 32 36·77	−14·360	+ 0·31	+ 0·010	+0·02	...	...	1976	...	...	...	...	...
1056	84·38	25	− 46 35 59·99	−14·347	+ 0·42	− 0·04*	−0·02	...	348	1973	2668	597	8191	20428	766
1057*	82·61	21	− 24 49 44·68	−14·344	+ 0·36	− 0·033	−0·08	252	349	1975	2669	598	8192	20431	*805*
1058	82·20	3	− 29 30 45·29	−14·331	+ 0·37	...	...	...	...	...	...	...	...	...	...
1059	82·27	11	+ 40 50 41·62	−14·326	+ 0·24	− 0·036	−0·10	...	...	1979	...	...	...	...	*806*
1060	84·00	3	+ 27 23 48·64	−14·210	+ 0·27	− 0·008	−0·01	...	...	...	...	599	8212	...	768*
1061*	82·00	4	− 15 48 35·97	−14·166	+ 0·35	− 0·030	−0·09	...	...	1983	2678	601	...	20498	...
1062	84·39	20	− 48 17 57·54	−13·935	+ 0·44	− 0·07*	−0·04	...	352	1991	2690	603	8251	20570	771
1063	84·50	6	− 51 39 36·94	−13·928	+ 0·45	...	...	...	351	1990	2691	...	8253	20572	772
1064*	80·77	13	− 19 21 20·09	−13·825	+ 0·36	− 0·042	−0·18	...	...	1996	2695	604	8261	20601	*811*
1065	80·47	3	− 13 17 17·40	−13·770	+ 0·36	...	...	...	...	...	...	...	...	...	...
1066	80·48	3	− 13 35 29·10	−13·713	+ 0·36	...	...	...	...	...	...	...	...	...	...
1067	80·50	3	− 13 46 42·52	−13·679	+ 0·36	...	...	...	...	..	...	...	...	...	...
1068	84·42	5	− 68 15 11·13	−13·665	+ 0·60	− 0·06*	−0·03	253*	353	1999	...	606	8280	20657	776*
1069	83·24	9	+ 5 22 1·38	−13·583	+ 0·32	+ 0·003	+0·01	...	...	...	...	...	...	...	...
1070	82·70	47	− 8 57 28·07	−13·495	+ 0·35	− 0·017	−0·04	254*	357	2009	2725	610	8313	20723	780*
1071*	82·40	12	− 29 43 29·45	−13·494	+ 0·40	− 0·028	−0·07	...	356	2008	2724	609	8312	20721	...
1072	84·59	4	− 40 21 56·55	−13·457	+ 0·43	...	...	...	...	2010	2726	...	8317	20731	...
1073	82·89	1	− 65 47 35·35	−13·400	+ 0·58	...	...	...	...	...	...	...	8323	20743	...
1074	81·54	1	+ 2 12 4·83	−13·325	+ 0·34	− 0·528	−1·83	...	...	...	...	...	...	...	...
1075	84·33	2	− 40 13 47·97	−13·299	+ 0·43	...	...	...	358	2017	2737	612	8340	20779	781
1076	84·44	12	− 44 16 29·17	−13·231	+ 0·45	...	...	...	361	2023	2744	...	8352	20806	785
1077	83·72	30	− 84 4 41·25	−13·096	+ 1·42	+ 0·03*	+0·04	...	...	2007	2727	611	8363	20818	784*
1078	81·43	12	− 0 36 41·08	−13·037	+ 0·35	− 0·020	−0·07	...	...	...	2753	...	...	20864	*817*
1079	80·44	3	− 17 35 43·67	−12·901	+ 0·38	...	...	...	...	...	...	...	...	...	...
1080	80·50	3	− 17 45 23·66	−12·900	+ 0·39	...	...	...	...	...	...	...	...	...	...
1081	84·00	4	+ 37 46 52·10	−12·880	+ 0·26	+ 0·084	+0·08	...	...	...	...	...	8402	...	...
1082	80·44	3	− 17 35 41·19	−12·873	+ 0·39	..	...	...	...	...	...	...	...	...	...
1083	84·38	13	+ 15 49 59·52	−12·860	+ 0·32	+ 0·005	0·00	...	...	...	...	...	...	...	...
1084	80·59	3	− 17 41 34·56	−12·844	+ 0·39	...	...	...	...	...	...	...	...	...	...
1085*	80·51	1	− 17 43 41·95	−12·812	+ 0·39	...	...	...	...	...	...	...	...	...	...

1051. Limits of magnitude, 5·0–6·2 : Period $2^{d.}\ 7^{h.}\ 51^{m.}\ 22^{s}\cdot 8$.

1085. Magnitude from Cape Observations.

No.	Bradley or Lacaille.	Piazzi.	B.A.C.	Star's Name.	Mag.	Mean Date. 1800+	No. of Obs.	Mean R.A. 1885·0.	Annual Precession. 1885·0.	Secular Variation. 1885·0.	Annual Proper Motion. μ_a.	Corr. for μ_a to 1885·0.
								h m s	s	s	s	s
1086*	1949	XV. 75	5089	32 Libræ	6·2	82·52	29	15 21 46·285	+3·3741	+0·015	—0·0010	—0·002
1087	1955	XV. 86	5098	3 Coronæ Bor. .....β	3·8	84·00	6	15 23 5·270	+2·4864	+0·002	—0·0134	—0·013
1088	1953	XV. 84	5100	34 Libræ	5·8	81·49	6	15 24 11·130	+3·3747	+0·015	—0·0006	—0·002
1089†	6422	XV. 98	5118	Lupi .....γ	3·2	84·24	6	15 27 28·740	+3·9795	+0·033	...	...
1090*	1960	XV. 106	5125	37 Libræ	4·9	80·81	18	15 27 53·493	+3·2518	+0·012	+0·0178	+0·075
1091	1968	XV. 115	5131	4 Coronæ Bor. .....θ	4·3	84·43	7	15 28 17·500	+2·4199	+0·002	—0·0055	—0·003
1092	1964	XV. 111	5134	38 Libræ ... .γ	4·0	83·17	24	15 29 5·593	+3·3440	+0·014	+0·0037	+0·007
1093	1973	XV. 121	5143	5 Coronæ Bor. .....α	2·4	81·47	15	15 29 49·121	+2·5299	+0·002	+0·0085	+0·030
1094†	1966*	XV. 116	5138	3 H. Scorpii	3·9	84·50	4	15 30 2·590	+3·6306	+0·021	—0·0035	—0·002
1095	...	...	...	Lalande 28453.....	7·2*	80·50	3	15 32 9·170	+3·4048	+0·015	...	...
1096*	1975	XV. 133	5161	41 Libræ	5·7	80·90	15	15 32 17·374	+3·4388	+0·016	+0·0057	+0·023
1097	6464	XV. 134	5165	Lupi .....ζ	5·2	84·45	6	15 33 17·235	+4·1180	+0·037	—0·016*	—0·009
1098	1982	XV. 147	5168	54 Boötis.....φ	5·4	81·33	12	15 33 41·807	+2·1480	+0·002	+0·0052	+0·019
1099	3242	XV. 152	5178	7 Coronæ Bor.(2nd✳)ζ	4·1†	84·36	6	15 35 2·800	+2·2595	+0·002	—0·0022	—0·001
1100	1981	XV. 145	5176	43 Libræ .....κ	5·0	81·46	6	15 35 19·260	+3·4505	+0·016	—0·0046	—0·016
1101*	1985	XV. 157	5190	44 Libræ .....η	5·5	81·26	12	15 37 36·275	+3·3699	+0·014	—0·0045	—0·017
1102	1991	XV. 162	5192	8 Coronæ Bor. .....γ	4·2	84·40	7	15 37 54·880	+2·5261	+0·003	—0·0082	—0·005
1103	1989	XV. 160	5194	23 Serpentis .....ψ	5·6	81·48	6	15 38 14·790	+3·0175	+0·007	—0·0063	—0·022
1104	1990	XV. 163	5196	24 Serpentis .....α	2·7	82·10	60	15 38 36·184	+2·9426	+0·006	+0·0079	+0·023
1105	...	...	...	Lalande 28724.....	7·6*	80·53	2	15 40 40·470	+3·4741	+0·016	...	...
1106	1996	XV. 170	5216	28 Serpentis .....β	3·8	84·46	10	15 40 52·848	+2·7620	+0·004	+0·0034	+0·002
1107	...	...	...	B.D. — 20° No. 4332	7·5*	80·52	2	15 42 58·620	+3·4839	+0·016	...	...
1108	2002	XV. 182	5234	35 Serpentis..... κ	4·3	84·00	3	15 43 33·630	+2·7021	+0·004	—0·0039	—0·004
1109*	2001	XV. 178	5230	32 Serpentis .....μ	3·5	81·92	25	15 43 37·142	+3·1319	+0·009	—0·0077	—0·024
1110	. .	...	...	Lalande 28795.....	8·1*	80·53	2	15 43 48·770	+3·4865	+0·016	...	...
1111	6484	...	...	Lacaille 6484	6·7	82·27	15	15 43 56·343	+8·1486	+0·336	...	...
1112	...	...	..	C.Z. XV. 3061	8½	80·53	3	15 44 6·670	+3·5825	+0·018	...	...
1113	2003	XV. 184	5238	34 Serpentis ... .ω	5·2	81·58	6	15 44 29·150	+3·0230	+0·007	+0·0031	+0·011
1114†	6533	...	5233	Trianguli Aust. ...β	3·1	84·42	5	15 45 1·096	+5·2611	+0·087	—0·027*	—0·016
1115*	2005	XV. 187	5245	37 Serpentis .....ε	3·7	82·41	27	15 45 5·003	+2·9786	+0·007	+0·0068	+0·018
1116	...	...	...	C.Z. XV. 3143	9	80·57	2	15 45 14·500	+3·5824	+0·018	...	...
1117	...	...	...	C.Z. XV. 3154	8½	80·53	2	15 45 25·250	+3·5829	+0·018	...	...
1118	...	...	...	A.G.C. 21500	8¼	80·53	4	15 45 42·030	+3·5840	+0·018	...	...
1119	2007	XV. 190	5251	45 Libræ .....λ	5·0	81·71	9	15 46 39·532	+3·4750	+0·015	—0·0026	—0·009
1120	...	...	...	C.Z. XV. 3260	9	80·53	3	15 47 6·660	+3·5915	+0·018	...	...

1086. ζ^1 Libræ in B.A.C. 1088. ζ^3 Libræ in B.A.C. 1094. 39 Libræ in B.A.C. : v Libræ in A.G.C. 1097. B.A.C. gives no letter.

No.	Mean Date. 1800+	No. of Obs.	Mean Dec. 1885·0.	Annual Precession. 1885·0.	Secular Variation. 1885·0.	Annual Proper Motion. μ_δ.	Corr. for μ_δ to 1885·0.	Fallows and Henderson.	Johnson.	Cape Catalogues. 1840.	1850.	1860.	1880.	A.G.C. 1875.	Melbourne. 1870 and 1880.
			° ′ ″	″	″	″	″								
1086*	82·68	25	− 16 18 52·80	−12·771	+ 0·39	− 0·046	−0·11	...	..	2036	2762	615	8414	20960	*819*
1087	84·00	6	+ 29 30 10·21	−12·682	+ 0·29	+ 0·074	+0 07	...	...	...	...	...	...	...	...
1088*	82·15	3	− 16 12 50·38	−12·608	+ 0·39	− 0·010	−0·03	...	...	2040	2768	618	...	21014	...
1089	84·24	6	− 40 46 44·07	−12·382	+ 0·46	...	...	255*	363	2046	2781	623	8464	21084	789
1090	80·48	12	− 9 40 8·61	−12·354	+ 0·38	− 0·235	−1·06	...	364	...	2786	...	...	21096	*820*
1091	84·43	7	+ 31 44 52·67	−12·327	+ 0·28	− 0·02	−0·01	...	...	...	...	...	...	...	...
1092	83·29	23	− 14 24 18·29	−12·270	+ 0·39	+ 0·019	+0·03	...	365	2050	2791	...	...	21127	*822*
1093	81·69	16	+ 27 6 9·02	−12·221	+ 0·30	− 0·094	−0·31	*157*	...	2056	2797	627	8483	...	790*
1094*	84·50	4	− 27 45 11·06	−12·206	+ 0·42	+ 0·002	0·00	...	366	2055	2793	625	8484	21146	...
1095	80·50	3	− 17 17 10·72	−12·058	+ 0·40	...	...	...	...	...	...	...	...	...	...
1096	80·76	12	− 18 55 19·23	−12·049	+ 0·40	− 0·078	−0·33	...	...	2060	2808	...	...	21202	*824*
1097*	84·45	6	− 44 16 44·60	−11·979	+ 0·49	− 0·29*	−0·16	...	...	2061	2811	631	8513	21226	...
1098	81·33	12	+ 40 43 44·08	−11·949	+ 0·26	+ 0·052	+0·19	...	...	...	...	...	...	...	...
1099*	84·36	6	+ 37 0 36·01	−11·854	+ 0·27	− 0·001	0·00	...	...	...	...	...	...	...	...
1100	81·56	1	− 19 18 18·09	−11·835	+ 0·41	− 0·097	−0·33	...	368	2066	2821	633	8532	21276	...
1101	81·26	12	− 15 18 19·14	−11·674	+ 0·40	− 0·063	−0·24	...	369	2072	2827	636	...	21327	*826*
1102	84·40	7	+ 26 39 38·78	−11·651	+ 0·31	+ 0·034	+0·02	...	...	...	...	...	...	...	...
1103	82·21	3	+ 2 53 4·64	−11·627	+ 0·36	− 0·145	−0·40	...	...	...	...	...	...	...	...
1104	82·31	32	+ 6 47 17·41	−11·602	+ 0·36	+ 0·056	+0·15	*134*	...	2074	2830	637	8557	...	794*
1105	80·53	2	− 20 6 26·66	−11·454	+ 0·42	...	...	...	...	...	...	...	...	...	...
1106	84·46	10	+ 15 46 56·03	−11·439	+ 0·34	− 0·035	−0·02	...	...	...	...	...	...	...	...
1107	80·52	2	− 20 25 29·44	−11·288	+ 0·42	...	...	...	...	...	...	...	...	...	...
1108	84·00	3	+ 18 29 50·82	−11·245	+ 0·33	− 0·083	−0·08	...	...	...	...	...	...	...	...
1109	82·39	18	− 3 4 38·80	−11·242	+ 0·38	− 0·013	−0·03	...	372	..	2856	...	8604	21457	*829*
1110	80·53	2	− 20 29 47·58	−11·227	+ 0·43	...	...	...	...	...	...	...	...	...	...
1111	82·43	13	− 77 41 7·52	−11·219	+ 0·99	...	...	...	...	...	...	...	8601	21445	...
1112	80·53	3	− 24 42 30·06	−11·207	+ 0·44	...	...	...	...	...	...	...	...	...	...
1113	82·25	6	+ 2 32 54·32	−11·179	+ 0·37	− 0·055	−0·15	...	...	...	...	...	...	...	...
1114	84·42	5	− 63 4 26·30	−11·140	+ 0·64	− 0·43*	−0·25	256*	371	2088	2858	645	8612	21484	798
1115	82·59	22	+ 4 49 28·46	−11·135	+ 0·36	+ 0·059	+0·14	...	...	...	...	...	8617	...	*831*
1116	80·57	2	− 24 37 38·84	−11·123	+ 0·44	...	...	...	...	...	...	...	...	...	...
1117	80·53	2	− 24 38 18·26	−11·111	+ 0·44	...	...	...	...	...	...	...	...	...	...
1118	80·53	4	− 24 40 9·04	−11·090	+ 0·44	...	...	...	...	...	...	...	...	21500	...
1119	82·21	3	− 19 49 20·15	−11·021	+ 0·43	− 0·013	−0·04	...	375	2098	2867	646	...	21520	...
1120	80·53	3	− 24 53 48·65	−10·987	+ 0·44	...	...	...	...	...	...	...	...	...	...

1099. Magnitude from Struve's *Mensuræ Micrometricæ*.

No.	Bradley or Lacaille.	Piazzi.	B.A.C.	Star's Name.	Mag.	Mean Date. 1800+	No. of Obs.	Mean R.A. 1885·0.	Annual Precession. 1885·0.	Secular Variation. 1885·0.	Annual Proper Motion. μ_a.	Corr. for μ_a to 1885·0.
								h m s	s	s	s	s
1121	2023	XV. 219	5284	41 Serpentis .....γ	4·0	84·37	13	15 51 8·454	+ 2·7473	+ 0·004	+0·0194	+0·012
1122*	2022	XV. 218	5290	48 Libræ	4·8	80·99	13	15 51 44·949	+ 3·3538	+ 0·012	—0·0028	—0·011
1123	2020*	XV. 216	5289	6 Scorpii .....π	3·1	84·58	4	15 51 53·690	+ 3·6199	+ 0·018	—0·0034	—0·001
1124	6619	XV. 217	5292	Lupi .....η	3¾	82·85	7	15 52 30·200	+ 3·9615	+ 0·027	...	...
1125	2029	XV. 229	5302	13 Coronæ Bor. .....ε	4·1	84·00	3	15 52 49·580	+ 2·4881	+ 0·003	—0·0074	—0·007
1126*	2024	XV. 225	5303	7 Scorpii .....δ	2·5	82·45	23	15 53 32·018	+ 3·5392	+ 0·016	—0·0018	—0·005
1127	2030	XV. 231	5306	50 Libræ	5·6	81·49	7	15 54 35·150	+ 3·2346	+ 0·010	—0·0025	—0·009
1128	2033	XV. 245	5324	Scorpii .....ξ	4·1	81·49	7	15 58 2·680	+ 3·2975	+ 0·011	—0·0065	—0·023
1129*	2034	XV. 251	5329	8 Scorpii (1st star)...β	2·0†	82·27	26	15 58 45·007	+ 3·4809	+ 0·014	—0·0026	—0·007
1130*	2042	XV. 268	5351	11 Scorpii	5·6	81·03	14	16 1 13·250	+ 3·3285	+ 0·011	—0·0050	—0·020
1131	...	...	...	Lalande 29338..... ...	7·0*	80·53	3	16 1 29·540	+ 3·4484	+ 0·013	...	...
1132	6623	...	5339	Apodis .....δ¹	5·2	84·55	12	16 3 11·947	+ 8·7595	+ 0·339	...	...
1133	...	...	...	Lalande 29395.....	6·9	80·48	4	16 3 17·950	+ 3·4525	+ 0·013	...	...
1134	...	...	...	C.Z. XVI. 232	8½	84·58	3	16 3 38·520	+ 3·9578	+ 0·024	...	...
1135	2052*	XVI. 2	5381	13 Scorpii .....c¹	4·7	81·57	9	16 5 13·230	+ 3·6862	+ 0·018	+0·0002	+0·001
1136	2055	XVI. 4	5382	14 Scorpii .....ν	4½	81·58	3	16 5 18·670	+ 3·4800	+ 0·013	—0·0028	—0·010
1137*	2065	XVI. 21	5414	1 Ophiuchi .....δ	2·8	81·90	58	16 8 19·161	+ 3·1425	+ 0·008	—0·0049	—0·015
1138	2067	XVI. 26	5420	18 Scorpii	5·7	81·55	6	16 9 22·200	+ 3·2402	+ 0·009	+0·0112	+0·039
1139	...	...	...	A.G.C. 22054	8	84·58	3	16 10 6·440	+ 3·9815	+ 0·023	...	...
1140†	6764	...	5425	Normæ .....γ²	4·6	84·48	15	16 11 14·269	+ 4·4831	+ 0·038	—0·018*	—0·009
1141*	2073	XVI. 41	5437	2 Ophiuchi .....ε	3·4	81·97	41	16 12 14·169	+ 3·1643	+ 0·008	+0·0040	+0·012
1142	...	...	...	Lalande 29689.....	6·5	81·55	6	16 12 30·850	+ 3·3829	+ 0·011	...	...
1143†	2077*	XVI. 50	5447	20 Scorpii .....σ	3·0	82·76	21	16 14 11·895	+ 3·6386	+ 0·015	—0·0022	—0·005
1144†	6727	...	5439	Apodis .....γ	3·9	83·04	15	16 15 50·914	+ 9·0495	+ 0·323	—0·045*	—0·088
1145	2086	XVI. 73	5463	22 Herculis.....τ	3·9	81·88	8	16 16 17·056	+ 1·8015	+ 0·005	—0·005	—0·016
1146	2084	XVI. 66	5466	20 Herculis.....γ	3·8	84·00	12	16 16 50·845	+ 2·6479	+ 0·004	—0·0049	—0·005
1147*	2082	XVI. 64	5467	4 Ophiuchi .....ψ	4·6	81·21	12	16 17 22·444	+ 3·5055	+ 0·013	—0·0028	—0·011
1148	6545	...	5412	Lacaille 6545	6·2	82·25	34	16 18 17·297	+20·9846	+ 2·408	0·000*	0·000
1149	2088	XVI. 80	5489	7 Ophiuchi .....χ	5·0	81·55	7	16 20 21·560	+ 3·4709	+ 0·012	—0·0038	—0·013
1150*	2091*	XVI. 84	5498	21 Scorpii .....α	1·1	82·72	29	16 22 21·376	+ 3·6708	+ 0·015	—0·0022	—0·005
1151†	6859	XVI. 92	5508	Scorpii ....N	4·6	84·56	6	16 23 52·090	+ 3·9101	+ 0·019	0·000*	0·000
1152	6866	XVI. 93	5513	Lacaille 6866	6·5	80·54	3	16 24 19·330	+ 3·6760	+ 0·015	...	...
1153*	2094	XVI. 94	5516	8 Ophiuchi .....φ	4·4	81·39	12	16 24 33·417	+ 3·4313	+ 0·011	—0·0051	—0·018
1154	2097	XVI. 100	5520	10 Ophiuchi .....λ	4·0	81·98	40	16 25 6·797	+ 3·0246	+ 0·006	—0·0027	—0·008
1155	2100	XVI. 103	5525	27 Herculis .....β	2·8	84·00	6	16 25 16·565	+ 2·5841	+ 0·004	—0·0090	—0·009

1126. Fundamental Star for Southern Zones.
1135. c^2 Scorpii in B.A.C. and A.G.C.
1128. 51 Libræ in B.A.C.
1151. B.A.C. gives no letter.

No.	Mean Date. 1800+	No. of Obs.	Mean Dec. 1885·0.	Annual Precession. 1885·0.	Secular Variation. 1885·0.	Annual Proper Motion. μ_δ.	Corr. for μ_δ to 1885·0.	Fallows and Henderson.	Johnson.	Cape Catalogues. 1840.	1850.	1860.	1880.	A.G.C. 1875.	Melbourne, 1870 and 1880.
			° ′ ″	″	″	″	″								
1121	84·38	12	+ 16 2 16·42	−10·691	+ 0·34	− 1·286	−0·80	...	...	...	...	...	8672	...	...
1122	81·19	12	− 13 56 47·35	−10·645	+ 0·42	− 0·014	−0·05	...	379	2116	2894	...	...	21634	*834*
1123	84·58	4	− 25 46 55·04	−10·634	+ 0·45	− 0·033	−0·01	...	378	2115	2893	653	8676	21638	803
1124	83·08	6	− 38 4 0·18	−10·590	+ 0·50	...	...	...	380	2117	2896	654	8684	21653	804
1125	84·00	3	+ 27 12 41·14	−10·565	+ 0·31	− 0·062	−0·06	...	...	...	...	...	...	...	...
1126*	82·42	22	− 22 17 35·70	−10·513	+ 0·44	− 0·028	−0·07	258*	381	2122	2903	655	8696	21685	806*
1127	82·21	3	− 8 5 6·02	−10·434	+ 0·41	− 0·012	−0·03	...	...	2125	2906	...	...	21711	...
1128*	82·16	3	− 11 3 17·75	−10·174	+ 0·42	− 0·019	−0·05	...	383	...	2916	...	...	21786	...
1129*	82·41	27	− 19 29 22·39	−10·121	+ 0·44	− 0·027	−0·07	260*	385	2133	2920	660	8743	21805	811*
1130	81·01	11	− 12 26 6·13	− 9·934	+ 0·42	− 0·033	−0·13	...	...	...	2934	...	...	21863	*839*
1131	80·53	3	− 17 55 48·62	− 9·914	+ 0·44	...	...	...	...	...	...	...	...	...	...
1132	84·55	12	− 78 24 11·62	− 9·783	+ 1·12	...	...	...	...	2136	2927	663	8784	21881	814*
1133	80·49	3	− 18 2 3·41	− 9·776	+ 0·44	...	...	...	...	...	...	...	...	21906	...
1134	84·58	3	− 37 9 28·50	− 9·749	+ 0·51	...	...	...	...	...	...	...	...	...	...
1135*	82·16	3	− 27 37 36·85	− 9·629	+ 0·48	− 0·022	−0·06	...	390	2149	2957	...	8807	21949	818
1136	81·58	3	− 19 9 38·75	− 9·621	+ 0·45	− 0·013	−0·04	262	391	2152	2959	667	8809	21954	819
1137	82·08	26	− 3 23 49·80	− 9·390	+ 0·41	− 0·137	−0·40	263*	393	...	2981	671	8838	22017	821*
1138	81·85	3	− 8 3 49·16	− 9·309	+ 0·42	− 0·514	−1·62	...	394	...	2984	...	...	22036	...
1139	84·58	3	− 37 27 57·15	− 9·252	+ 0·52	...	...	...	...	...	...	...	...	22054	*845*
1140	84·48	15	− 49 52 18·76	− 9·164	+ 0·58	− 0·05*	−0·03	...	396	2162	2989	673	8859	22075	823
1141	82·15	26	− 4 24 40·41	− 9·086	+ 0·42	+ 0·034	+0·10	...	398	...	2997	...	...	22111	*846*
1142	82·22	3	− 14 35 29·52	− 9·064	+ 0·44	...	...	...	...	...	...	...	...	22122	...
1143	82·75	23	− 25 18 56·10	− 8·932	+ 0·48	− 0·007	−0·02	...	399	2174	3005	679	8887	22158	...
1144	83·33	16	− 78 38 9·53	− 8·803	+ 1·19	− 0·16*	−0·27	...	397	2165	2999	677	8896	22170	827
1145	82·25	12	+ 46 35 17·81	− 8·769	+ 0·24	+ 0·036	+0·10	...	...	2181	...	...	...	...	*848*
1146	84·00	12	+ 19 25 25·95	− 8·724	+ 0·35	− 0·048	−0·05	...	...	...	...	...	8915	...	*851*
1147	81·49	12	− 19 46 1·29	− 8·683	+ 0·46	− 0·062	−0·22	265	400	2179	3015	681	...	22219	*852*
1148	83·35	21	− 86 8 36·99	− 8·611	+ 2·77	− 0·04*	−0·07	...	388	2153	2980	674	8914	22180	825*
1149	81·85	3	− 18 11 39·70	− 8·446	+ 0·46	− 0·018	−0·06	...	402	...	3032	...	...	22280	...
1150	83·04	53	− 26 10 32·26	− 8·288	+ 0·49	− 0·028	−0·05	267*	404	2187	3037	684	8954	22314	832*
1151*	84·56	6	− 34 27 9·42	− 8·167	+ 0·52	− 0·02*	−0·01	...	405	2193	3042	685	8963	22347	...
1152	80·54	3	− 26 17 9·81	− 8·131	+ 0·49	...	...	...	...	...	3044	...	8964	22353	...
1153	81·82	12	− 16 21 39·19	− 8·112	+ 0·46	− 0·028	−0·09	268	406	2194	3045	686	...	22358	*856*
1154	82·03	25	+ 2 14 11·80	− 8·067	+ 0·41	− 0·065	−0·19	...	...	...	...	...	8971	...	...
1155	84·00	6	+ 21 44 27·06	− 8·054	+ 0·35	− 0·015	−0·02	...	...	...	...	...	...	...	...

1128. Companion *n. f.* 7¾ magnitude.

1129. Magnitude from Struve's *Mensuræ Micrometricæ*.

No.	Bradley or Lacaille.	Piazzi.	B.A.C.	Star's Name.	Mag.	Mean Date. 1800+	No. of Obs.	Mean R.A. 1885·0.	Annual Precession. 1885·0	Secular Variation. 1885·0.	Annual Proper Motion. μ_a.	Corr. for μ_a to 1885·0.
								h m s	s	s	s	s
1156	...	...	...	A.G.C. 22396	8	84·60	2	16 25 59·690	+4·0009	+ 0·021	...	...
1157†	6817	...	5510	Apodis .....β	4·5	82·59	17	16 26 41·107	+8·5080	+ 0·242	—0·105*	—0·253
1158	2101	XVI. 108	5531	28 Herculis.....n	5·5	81·55	7	16 26 56·130	+2·9484	+ 0·006	—0·0005	—0·002
1159†	2103*	XVI. 113	5539	23 Scorpii .....τ	2·9	83·63	12	16 28 43·400	+3·7270	+ 0·015	—0·0022	—0·003
1160	...	...	...	A.G.C. 22467	8¼	83·50	2	16 29 44·210	+5·2927	+ 0·056	...	...
1161*	2108	XVI. 121	5547	12 Ophiuchi	5·8	81·14	12	16 30 18·898	+3·1172	+ 0·007	+0·0254	+0·098
1162	2113	XVI. 132	5552	35 Herculis.....σ	4·3	80·67	3	16 30 23·667	+1·9328	+ 0·004	—0·0020	—0·009
1163*	2109	XVI. 123	5548	13 Ophiuchi .....ζ	2·8	82·86	30	16 30 49·547	+3·2979	+ 0·009	—0·0007	—0·001
1164*	2114	XVI. 143	5579	24 Scorpii	5·2	81·17	12	16 34 55·293	+3·4657	+ 0·010	—0·0027	—0·010
1165*	2120	XVI. 155	5591	14 Ophiuchi	5·9	81·07	12	16 35 53·100	+3·0419	+ 0·006	—0·0096	—0·038
1166†	6911	...	5578	Trianguli Aust. ...α	2·2	84·00	12	16 36 29·720	+6·2953	+ 0·090	0·0000	0·000
1167	2127	XVI. 165	5604	40 Herculis.....ζ	3·1	84·00	6	16 36 57·040	+2·2970	+ 0·003	—0·0356	—0·036
1168	...	...	...	.....	9†	83·51	2	16 38 52·020	+5·2672	+ 0·049	...	...
1169	2133	XVI. 173	5617	44 Herculis.....η	3·7	84·00	3	16 38 57·230	+2·0516	+ 0·004	+0·0028	+0·003
1170	2126*	XVI. 168	5614	25 Scorpii	7	81·55	7	16 39 48·910	+3·6666	+ 0·013	+0·0019	+0·007
1171†	6956	...	5609	Aræ.....η	3·8	84·55	11	16 39 51·504	+5·1491	+ 0·045	...	...
1172	...	...	...	A.G.C. 22693	7½	84·60	2	16 40 54·340	+4·0219	+ 0·018	...	...
1173†	2132*	XVI. 184	5632	26 Scorpii .....ε	2·3	84·46	6	16 42 42·970	+3·9260	+ 0·016	—0·0501	—0·027
1174*	2138	XVI. 191	5637	20 Ophiuchi	4·7	80·93	20	16 43 28·286	+3·3083	+ 0·008	+0·0046	+0·019
1175†	7006	XVI. 189	5638	Scorpii .....μ^1	3·6	84·57	6	16 44 4·900	+4·0548	+ 0·018	...	...
1176	7009	XVI. 193	5640	Scorpii .....μ^2	3·9	84·58	3	16 44 32·800	+4·0544	+ 0·018	...	...
1177	6948	...	...	Lacaille 6948	6·8	82·35	11	16 45 6·737	+8·1618	+ 0·170	...	...
1178	7016	XVI. 198	5651	Scorpii .....ζ^1	5·8	84·49	5	16 45 52·980	+4·2206	+ 0·020	...	...
1179†	7025	XVI. 206	5661	Scorpii .....ζ^2	3·6	84·47	4	16 46 29·540	+4·2213	+ 0·020	—0·019*	—0·010
1180	2144	XVI. 223	5674	49 Herculis	6·4	84·00	6	16 46 50·765	+2·7283	+ 0·004	+0·0003	0·000
1181	...	...	...	A.G.C. 22893	8	84·63	3	16 48 24·930	+4·0311	+ 0·017	...	...
1182	2146	XVI. 227	5688	23 Ophiuchi	5·6	81·58	9	16 48 26·910	+3·2053	+ 0·007	—0·0044	—0·015
1183†	7034	...	5683	Aræ.....ζ	3·2	84·57	6	16 49 6·307	+4·9468	+ 0·034	0·000*	0·000
1184*	2148	XVI. 234	5698	24 Ophiuchi	5·6	81·20	12	16 49 51·897	+3·6126	+ 0·011	—0·0009	—0·003
1185	7036	...	5691	Lacaille 7036	7·2	83·48	1	16 49 52·960	+5·2065	+ 0·041	...	...
1186†	7050	...	5697	Aræ .....ϵ^1	4·2	84·53	7	16 50 25·214	+4·7643	+ 0·030	...	...
1187	...	XVI. 244	...	Piazzi XVI. 244	6·5	81·63	6	16 52 9·140	+3·4077	+ 0·008	...	...
1188	2156	XVI. 252	5708	27 Ophiuchi .....κ	3·4	81·80	55	16 52 13·559	+2·8571	+ 0·004	—0·0212	—0·068
1189*	2159	XVI. 263	5724	30 Ophiuchi	5·0	81·09	15	16 54 59·819	+3·1633	+ 0·006	—0·0051	—0·020
1190	2161	XVI. 272	5731	58 Herculis .....ε	4·0	84·00	6	16 55 53·410	+2·2974	+ 0·003	—0·0047	—0·005

1164. B.A.C. assigns this Star to Ophiuchus.
1184. Fundamental Star for Southern Zones.

No.	Mean Date. 1800+	No. of Obs.	Mean Dec. 1885·0.	Annual Precession. 1885·0.	Secular Variation. 1885·0.	Annual Proper Motion. μ_δ.	Corr. for μ_δ to 1885·0.	Fallows and Henderson.	Johnson.	Cape Catalogues. 1840.	1850.	1860.	1880.	A.G.C. 1875.	Melbourne, 1870 and 1880.
			° ′ ″	″	″	″	″								
1156	84·60	2	− 37 8 9·96	− 7·996	+ 0·54	...	...	...	...	...	...	...	...	22396	*858*
1157	82·50	16	− 77 16 24·99	− 7·941	+ 1·14	− 0·34*	−0·85	...	...	2190	3043	687	8984	22393	836*
1158	82·15	3	+ 5 45 59·69	− 7·921	+ 0·40	− 0·001	0·00	...	...	...	...	...	...	...	...
1159	83·51	14	− 27 58 34·64	− 7·778	+ 0·50	− 0·023	−0·03	269	409	2203	3056	690	8999	22451	839
1160	83·50	2	− 60 55 31·34	− 7·696	+ 0·72	...	...	...	...	...	...	...	...	22467	...
1161	81·70	12	− 2 4 40·09	− 7·649	+ 0·43	− 0·309	−1·02	...	410	...	3061	...	9011	22479	*862*
1162	81·67	12	+ 42 40 29·29	− 7·642	+ 0·26	+ 0·026	+0·09	...	...	2208	...	...	...	...	...
1163	82·86	28	− 10 19 59·49	− 7·607	+ 0·45	+ 0·035	+0·07	...	411	...	3062	...	9015	22491	*863*
1164*	81·17	12	− 17 31 6·32	− 7·275	+ 0·48	+ 0·018	+0·07	271	413	2216	3087	692	9060	22588	*864*
1165	81·39	12	+ 1 24 6·21	− 7·196	+ 0·42	+ 0·043	+0·16	...	...	...	...	...	...	...	*865*
1166*	84·00	12	− 68 48 51·59	− 7·146	+ 0·86	− 0·057	−0·06	270*	412	2213	3086	693	9070	22607	847*
1167	84·00	6	+ 31 48 42·65	− 7·109	+ 0·32	+ 0·410	+0·41	...	...	...	...	696	9074	...	848*
1168*	83·51	2	− 60 15 30·18	− 6·952	+ 0·72	...	...	...	...	...	...	...	...	...	...
1169	84·00	3	+ 39 8 30·30	− 6·945	+ 0·28	− 0·077	−0·08	...	...	2225	...	...	...	...	...
1170	82·15	3	− 25 19 4·53	− 6·874	+ 0·50	− 0·03	−0·09	...	...	2224	3108	699	9106	22675	...
1171	84·55	11	− 58 50 3·06	− 6·870	+ 0·71	...	...	...	414	2222	3104	697	9105	22672	850
1172	84·60	2	− 37 2 30·42	− 6·785	+ 0·55	...	...	...	...	...	...	...	...	22693	*869*
1173	84·46	6	− 34 4 58·70	− 6·635	+ 0·54	− 0·271	−0·15	272*	415	2226	3114	701	9123	22731	*870*
1174	80·51	12	− 10 34 42·41	− 6·573	+ 0·46	− 0·075	−0·34	...	417	2231	3118	...	...	22751	*871*
1175	84·57	6	− 37 50 54·98	− 6·522	+ 0·56	...	...	*73*	416	2232	3119	703	9132	22761	...
1176	84·58	3	− 37 49 11·67	− 6·483	+ 0·56	...	...	*74*	418	2233	3121	...	9141	22778	...
1177	82·67	11	− 76 1 43·98	− 6·436	+ 1·13	...	...	...	...	...	...	...	9145	22770	...
1178	84·49	5	− 42 10 9·44	− 6·373	+ 0·59	...	...	...	...	2236	3129	704	9160	22812	...
1179	84·47	4	− 42 9 46·21	− 6·323	+ 0·59	− 0·25*	−0·13	...	..	2239	3136	705	9170	22832	...
1180	84·00	6	+ 15 10 4·63	− 6·292	+ 0·38	− 0·001	0·00	...	...	...	...	...	...	...	...
1181	84·63	3	− 37 0 1·50	− 6·162	+ 0·56	...	...	...	...	...	...	...	...	22893	...
1182	82·15	3	− 5 57 53·19	− 6·159	+ 0·45	− 0·05	−0·14	...	420	...	3158	...	...	22901	...
1183	84·57	6	− 55 48 24·03	− 6·105	+ 0·69	− 0·07*	−0·03	...	419	2244	3154	706	9209	22916	855*
1184*	81·20	12	− 22 57 59·07	− 6·041	+ 0·50	− 0·018	−0·07	...	...	...	3166	...	9215	22935	*874*
1185	83·48	1	− 59 8 47·95	− 6·039	+ 0·73	...	...	...	...	...	3161	...	9214	22930	...
1186	84·53	7	− 52 58 54·99	− 5·995	+ 0·67	...	...	...	421	2246	3165	707	9220	22941	856
1187	82·28	3	− 14 41 26·44	− 5·851	+ 0·48	...	...	...	...	...	...	...	...	22991	...
1188	82·30	27	+ 9 33 16·97	− 5·845	+ 0·40	+ 0·015	+0·04	...	...	...	...	708	9236	...	857*
1189	81·29	12	− 4 2 56·41	− 5·611	+ 0·44	− 0·071	−0·26	...	...	...	3184	713	...	23051	*877*
1190	84·00	6	+ 31 5 47·48	− 5·537	+ 0·32	+ 0·032	+0·03	...	...	...	...	...	9269	...	...

1166. Proper Motion from Newcomb's Catalogue of 1098 Standard Stars.

1168. Magnitude from Cape Observations.

No.	Bradley or Lacaille.	Piazzi.	B.A.C.	Star's Name.	Mag.	Mean Date. 1800+	No. of Obs.	Mean R.A. 1885·0.	Annual Precession. 1885·0.	Secular Variation. 1885·0.	Annual Proper Motion. μ_a.	Corr. for μ_a to 1885·0.
								h m s	s	s	s	s
1191	2165	XVI. 280	5747	59 Herculis.....*d*	5·3	84·52	6	16 57 21·670	+ 2·2127	+0·003	−0·0014	−0·001
1192	...	...	...	A.G.C. 23025.....	8¼	...	...	16 58 (9)	+28·9332	+2·844	...	...
1193	...	XVI. 277	5748	Piazzi XVI. 277	7¾	81·54	6	16 58 11·070	+ 3·3212	+0·007	...	...
1194	...	...	...	A.G.C. 23027	8	81·48	10	16 58 28·694	+30·1575	+3·094	...	...
1195	...	...	...	A.G.C. 23128	8¼	84·62	2	16 58 37·270	+ 4·0418	+0·014	...	...
1196	2167	XVI. 293	5765	60 Herculis.....	4·9	84·49	11	17 0 2·755	+ 2·7766	+0·004	+0·0030	+0·002
1197	...	...	...	Lalande 31109.....	6·2	81·79	6	17 0 55·133	+ 3·1062	+0·005	...	...
1198*	2171	XVI. 306	5781	35 Ophiuchi.....*η*	2·6	81·90	29	17 3 46·960	+ 3·4340	+0·007	+0·0003	+0·001
1199†	7155	XVI. 302	5778	Scorpii.....*η*	3·6	83·59	9	17 3 55·126	+ 4·2856	+0·017	−0·001*	−0·001
1200	...	...	...	Lalande 31210.....	6·5	81·58	8	17 4 16·690	+ 3·3614	+0·007	...	...
1201	7165	XVI. 311	5789	Lacaille 7165.....	7·0	80·51	3	17 5 1·620	+ 3·7312	+0·010	...	...
1202	...	...	...	.....	9½†	84·62	2	17 5 22·530	+ 4·0410	+0·013	...	...
1203	2178	XVII. 16	5802	37 Ophiuchi	5·5	81·59	7	17 7 2·540	+ 2·8259	+0·004	−0·0015	−0·005
1204	2183	XVII. 29	5821	64 Herculis (1st star)..*a*	Var.	84·00	12	17 9 24·240	+ 2·7345	+0·004	−0·0019	−0·002
1205	...	...	...	.....	9†	84·64	3	17 9 45·940	+ 4·0420	+0·012	...	...
1206	7088	...	5794	Lacaille 7088.....	6·4	82·19	11	17 9 58·886	+11·0852	+0·248	−0·008*	−0·022
1207	2185	XVII. 35	5828	65 Herculis.....*δ*	3·3	84·00	7	17 10 18·471	+ 2·4643	+0·003	−0·0028	−0·003
1208*	2184	XVII. 34	5830	41 Ophiuchi	5·0	80·98	14	17 10 42·466	+ 3·0796	+0·005	−0·0041	−0·016
1209	2187	XVII. 39	5834	67 Herculis.....*π*	3·4	84·00	2	17 11 2·390	+ 2·0900	+0·003	−0·0035	−0·004
1210	2186	XVII. 47	5844	40 Ophiuchi .....*ξ*	4·5	81·04	13	17 14 6·652	+ 3·5750	+0·007	+0·0165	+0·065
1211	2188*	XVII. 51	5846	Bradley 2188	6·8	84·31	1	17 14 38·340	+ 3·6778	+0·008	−0·0071	−0·005
1212†	2189*	XVII. 53	5851	42 Ophiuchi.....*θ*	3·4	82·50	16	17 14 56·824	+ 3·6805	+0·008	−0·0024	−0·006
1213	7233	...	5850	Aræ .....*γ*	3·6	84·51	9	17 15 42·917	+ 5·0373	+0·023	0·000*	0·000
1214†	7237	...	5852	Aræ.....*β*	2·8	84·56	8	17 15 44·460	+ 4·9758	+0·022	+0·003*	+0·001
1215	.....	...	...	C.Z. XVII. 1104.....	8	84·68	2	17 16 57·920	+ 4·0390	+0·010	...	...
1216	...	XVII. 76	5866	Piazzi XVII. 76	6·4	81·48	6	17 17 49·450	+ 3·5858	+0·007	...	...
1217†	2198*	XVII. 83	5876	44 Ophiuchi.....	4·5	84·54	8	17 19 20·774	+ 3·6602	+0·007	−0·0028	−0·001
1218	...	...	...	.....	9½†	84·66	2	17 20 18·250	+ 4·0380	+0·010	. .	...
1219*	...	XVII. 99	5890	27 H. Ophiuchi.....	4·6	81·09	12	17 20 31·810	+ 3·1872	+0·005	−0·0072	−0·028
1220†	7271	...	5877	Aræ ....*δ*	3·7	84·60	1	17 20 43·400	+ 5·4090	+0·026	−0·009*	−0·004
1221	2206	XVII. 103	5893	49 Ophiuchi.....*σ*	4·4	84·00	8	17 20 48·563	+ 2·9747	+0·004	−0·0017	−0·002
1222	2205*	XVII. 106	5901	34 Scorpii .....*v*	3·2	84·63	2	17 22 56·710	+ 4·0741	+0·010	−0·0038	−0·001
1223†	7301	...	5899	Aræ.....*α*	2·9	84·52	8	17 22 57·156	+ 4·6329	+0·015	−0·005*	−0·002
1224	...	...	...	C.Z. XVII. 1613	8¾	84·68	2	17 24 23·350	+ 4·0346	+0·009	...	...
1225*	2209*	XVII. 115	5907	51 Ophiuchi.....	4·9	81·01	14	17 24 23·920	+ 3·6569	+0·007	−0·0023	−0·009

210. Fundamental Star for Southern Zones.

1217. *b* Ophiuchi in B.A.C. and A.G.C.

1225. Fundamental Star for Southern Zones. c^2 Ophiuchi in B.A.C., *c* in A.G.C.

No.	Mean Date. 1800+	No. of Obs.	Mean Dec. 1885·0.	Annual Precession. 1885·0.	Secular Variation. 1885·0.	Annual Proper Motion. μ_δ.	Corr. for μ_δ to 1885·0.	Fallows and Henderson.	Johnson.	Cape Catalogues. 1840.	1850.	1860.	1880.	A.G.C. 1875.	Melbourne, 1870 and 1880.
			° ′ ″	″	″	″	″								
1191	84·52	6	+ 33 44 7·33	− 5·413	+ 0·31	+ 0·008	0·00	...	...	...	...	...	...	...	...
1192	85·08	1	− 87 8 50·99	− 5·346	+ 4·07	...	...	...	...	...	...	...	9270	23025	...
1193	82·06	4	− 10 55 33·14	− 5·343	+ 0·47	...	...	...	...	2264	3499	...	9294	23122	...
1194	81·36	7	− 87 16 30·97	− 5·320	+ 4·24	...	...	...	...	...	...	...	9273	23027	*878*
1195	84·62	2	− 36 56 22·48	− 5·308	+ 0·57	...	...	...	...	...	...	...	...	23128	...
1196	84·49	11	+ 12 53 58·80	− 5·186	+ 0·39	− 0·002	0·00	...	...	...	...	...	...	...	...
1197	82·53	3	− 1 30 0·42	− 5·113	+ 0·44	...	...	...	...	...	...	...	...	23175	...
1198	82·00	24	− 15 34 53·30	− 4·870	+ 0·48	+ 0·097	+0·29	276*	425	2272	3220	721	9344	23251	*882*
1199	83·83	8	− 43 5 9·52	− 4·859	+ 0·61	− 0·30	−0·35	*61*	424	2270	3218	720	9345	23250	863
1200	82·21	3	− 12 33 14·55	− 4·827	+ 0·48	...	...	...	...	...	...	...	...	23262	...
1201	80·51	3	− 26 53 49·32	− 4·765	+ 0·53	...	...	...	...	...	3224	722	9355	23272	...
1202*	84·62	2	− 36 42 20·43	− 4·735	+ 0·58	...	...	...	...	...	...	...	...	...	...
1203	82·21	3	+ 10 43 31·67	− 4·592	+ 0·40	− 0·026	−0·07	...	...	...	...	...	...	...	...
1204*	84·00	12	+ 14 31 20·16	− 4·391	+ 0·39	+ 0·030	+0·03	*146*	...	2286	3248	*731*	9396	...	868*
1205*	84·64	3	− 36 36 48·02	− 4·362	+ 0·58	...	...	...	...	...	...	...	...	...	...
1206	82·55	11	− 80 44 54·32	− 4·342	+ 1·58	− 0·06*	−0·15	...	...	2274	3228	724	9393	23360	866*
1207	84·00	6	+ 24 58 32·10	− 4·315	+ 0·35	− 0·161	−0·16	...	...	2292	...	...	...	...	...
1208	81·13	12	− 0 18 51·50	− 4·281	+ 0·44	− 0·064	−0·25	...	427	...	3255	...	...	23414	*886*
1209	84·00	2	+ 36 56 21·34	− 4·251	+ 0·30	+ 0·005	+0·01	...	...	...	...	...	...	...	...
1210*	81·32	12	− 20 59 16·77	− 3·988	+ 0·51	− 0·201	−0·74	...	428	2296	3265	...	...	23481	*887*
1211	84·31	1	− 24 47 18·76	− 3·944	+ 0·53	− 0·039	−0·03	...	...	...	3267	...	9445	23490	872
1212	82·50	16	− 24 53 0·25	− 3·916	+ 0·53	− 0·035	−0·09	...	432	2301	3271	737	9452	23500	873*
1213	84·51	9	− 56 16 3·08	− 3·850	+ 0·72	0·00*	0·00	278*	429	2298	3270	738	9457	23515	874
1214	84·56	8	− 55 25 9·39	− 3·847	+ 0·71	− 0·04*	−0·02	*42*	430	2299	3272	739	9459	23516	875
1215	84·68	2	− 36 21 1·03	− 3·745	+ 0·58	...	...	...	...	...	...	...	...	...	...
1216	82·22	3	− 21 19 58·62	− 3·670	+ 0·52	...	...	...	...	...	3283	...	...	23577	...
1217*	84·54	8	− 24 4 6·02	− 3 538	+ 0·53	− 0·120	−0·06	...	...	2312	3291	744	9503	23614	877
1218*	84·66	2	− 36 14 59·25	− 3·456	+ 0·58	...	...	...	...	...	...	...	...	...	...
1219	81·39	12	− 4 59 1·53	− 3·436	+ 0·46	− 0·045	−0·16	...	...	...	3302	...	9512	23641	*890*
1220	84·60	1	− 60 35 9·05	− 3·421	+ 0·78	− 0·09*	−0·04	...	434	2313	3293	746	9513	23636	879
1221	84·00	8	+ 4 14 28·64	− 3·414	+ 0·43	+ 0·015	+0·02	...	...	...	...	...	9517	...	*891*
1222	84·63	2	− 37 12 9·18	− 3·228	+ 0·59	− 0·028	−0·01	...	437	2326	3309	751	9532	23698	...
1223	84·52	8	− 49 46 59·43	− 3·228	+ 0·67	− 0·09*	−0·04	279*	436	2324	3308	750	9530	23694	881
1224	84·68	2	− 36 4 22·64	− 3·104	+ 0·58	...	...	...	...	...	...	...	...	...	...
1225*	81·25	12	− 23 52 20·77	− 3·102	+ 0·53	− 0·012	−0·05	...	438	2331	3313	...	9544	23739	*894*

1202. Magnitude from Cape Observations.
1205, 1218. Magnitude from Cape Observations.

1204. Limits of magnitude, 3·1–3·9 : Period irregular.

No.	Bradley or Lacaille.	Piazzi.	B.A.C.	Star's Name.	Mag.	Mean Date. 1800+	No. of Obs.	Mean R.A. 1885·0.	Annual Precession. 1885·0.	Secular Variation. 1885·0.	Annual Proper Motion. μ_a.	Corr. for μ_a to 1885·0.
								h m s	s	s	s	s
1226	7078	...	...	Lacaille 7078	6·4	81·65	10	17 25 19·635	+18·6920	+0·591	...	...
1227†	2210*	XVII. 121	5915	35 Scorpii .....λ	2·0	84·56	6	17 25 47·990	+ 4·0693	+0·009	−0·0013	−0·001
1228†	7351	XVII. 138	5935	Scorpii .....θ	2·1	84·56	11	17 29 3·330	+ 4·3045	+0·010	...	...
1229	2215	XVII. 150	5940	53 Ophiuchi .....f	6·7*	81·61	7	17 29 9·030	+ 2·8468	+0·003	−0·004	−0·014
1230	...	...	...	A.G.C. 23852	9½	84·65	2	17 29 25·670	+ 4·0383	+0·008	...	...
1231	2218	XVII. 153	5941	55 Ophiuchi .....α	2·2	82·43	21	17 29 35·732	+ 2·7751	+0·003	+0·0066	+0·017
1232	7184	...	...	Lacaille 7184	8	81·85	9	17 30 23·192	+14·1710	+0·264	...	...
1233*	2217	XVII. 157	5949	55 Serpentis .....ξ	3·7	82·76	20	17 31 0·081	+ 3·4358	+0·005	−0·0050	−0·011
1234*	2220	XVII. 161	5953	57 Ophiuchi .....μ	4·7	81·49	13	17 31 35·647	+ 3·2600	+0·004	−0·0031	−0·011
1235	...	...	...	C.Z. XVII. 2208	9	84·65	2	17 33 5·270	+ 4·0326	+0·007	...	...
1236†	7364	...	5963	Pavonis .....η	3·8	84·55	9	17 34 26·752	+ 5·8789	+0·022	...	...
1237†	7393	XVII. 174	5970	Scorpii .....κ	2·6	84·55	4	17 34 31·990	+ 4·1472	+0·007	0·000*	0·000
1238	...	...	...	.....	7½†	84·68	2	17 34 34·440	+ 4·0286	+0·006	...	...
1239*	2225	XVII. 184	5976	56 Serpentis .....ο	4·4	81·68	12	17 34 57·083	+ 3·3746	+0·004	−0·0063	−0·021
1240	...	XVII. 193	5985	Piazzi XVII. 193 ...	6·5*	82·63	17	17 35 55·900	+ 2·9239	+0·003	...	...
1241	2233	XVII. 211	5990	85 Herculis ....ι	3·9	80·54	2	17 36 13·140	+ 1·6921	+0·004	−0·0004	−0·002
1242	...	XVII. 202	...	Piazzi XVII. 202 ...	6·6	81·64	7	17 37 34·630	+ 3·2364	+0·004	...	...
1243*	2229	XVII. 209	5996	60 Ophiuchi .....β	2·9	81·79	62	17 37 47·493	+ 2·9650	+0·003	−0·0041	−0·013
1244†	7425	XVII. 210	6004	Scorpii .....ι¹	3·3	84·58	4	17 39 32·540	+ 4·1930	+0·006	...	...
1245	...	XVII. 222	...	Piazzi XVII. 222 ...	7·8*	82·61	3	17 39 55·540	+ 2·9380	+0·003	...	...
1246	...	XVII. 226	6012	Piazzi XVII. 226 ...	7·8*	82·64	3	17 40 19·150	+ 2·9385	+0·003	...	...
1247	...	XVII. 230	...	Piazzi XVII. 230 ...	7·7*	82·65	3	17 40 32·800	+ 2·9393	+0·003	...	...
1248	...	...	...	.....	8†	84·65	2	17 40 34·500	+ 4·0224	+0·005	...	...
1249	...	XVII. 233	...	Piazzi XVII. 233 ...	7·1*	82·59	3	17 41 3·190	+ 2·9366	+0·003	...	...
1250	...	XVII. 235	...	Piazzi XVII. 235 ...	84*	82·65	3	17 41 24·150	+ 2·9385	+0·003	...	...
1251	2237	XVII. 244	6021	86 Herculis.....μ	3·5	82·35	17	17 41 57·511	+ 2·3700	+0·003	−0·0244	−0·065
1252†	7449	XVII. 229	6018	Scorpii .....G	3·4	84·60	4	17 42 1·710	+ 4·0769	+0·005	+0·006*	+0·002
1253*	2236	XVII. 239	6020	62 Ophiuchi .....γ	3·8	82·78	27	17 42 7·595	+ 3·0083	+0·003	−0·0037	−0·008
1254	...	...	...	.....	7½	84·65	1	17 44 9·240	+ 4·0179	+0·005	...	...
1255	...	XVII. 261	...	Piazzi XVII. 261 ...	6·8*	82·63	16	17 45 25·540	+ 2·9495	+0·003	...	...
1256	...	...	...	Lalande 32633.....	6·6	81·64	7	17 46 2·770	+ 3·1005	+0·003	...	...
1257	...	...	...	C.Z. XVII. 3092	9	80·56	3	17 46 22·440	+ 3·8069	+0·004	...	...
1258	...	...	...	C.Z. XVII. 3094	9	80·61	3	17 46 23·790	+ 3·8117	+0·004	...	...
1259	7001	...	5936	Octantis .....χ	5·8	81·86	26	17 47 10·256	+35·7462	+0·900	...	...
1260	...	...	...	C.Z. XVII. 3206	9	84·70	1	17 47 58·240	+ 3·7818	+0·003	...	...

1252, 1259. B.A.C. gives no letter.

No.	Mean Date. 1800+	No. of Obs.	Mean Dec. 1885·0.	Annual Precession. 1885·0.	Secular Variation. 1885·0.	Annual Proper Motion. μ_δ.	Corr. for μ_δ to 1885·0.	Fallows and Henderson.	Johnson.	Cape Catalogues. 1840.	1850.	1860.	1880.	A.G.C. 1875.	Melbourne, 1870 and 1880.
			° ′ ″	″	″	″	″								
1226	82·14	15	− 85 9 49·40	− 3·024	+ 2·70	...	...	...	...	...	...	...	9538	23696	*893*
1227	84·56	6	− 37 1 6·16	− 2·982	+ 0·59	− 0·048	−0·02	280*	439	2334	3320	754	9562	23778	*895*
1228	84·56	11	− 42 55 23·23	− 2·700	+ 0·62	...	...	281*	440	2341	3333	757	9586	23849	886
1229	81·93	3	+ 9 39 54·46	− 2·692	+ 0·41	− 0·015	−0·05	...	...	...	...	...	...	...	...
1230	84·65	2	− 36 5 21·04	− 2·667	+ 0·58	...	...	...	...	...	...	...	...	23852	...
1231	83·12	26	+ 12 38 40·63	− 2·653	+ 0·40	− 0·217	−0·41	*141*	...	2344	3335	760	9591	...	888*
1232	82·21	9	− 83 11 17·17	− 2·584	+ 2·05	...	...	...	...	...	...	...	9588	23843	...
1233	82·76	20	− 15 19 29·79	− 2·531	+ 0·50	− 0·047	−0·11	282	441	2347	3340	762	9601	23879	*897*
1234	82·02	12	− 8 2 50·92	− 2·479	+ 0·47	− 0·006	−0·02	...	442	...	3342	...	...	23892	*899*
1235	84·65	2	− 35 52 29·03	− 2·351	+ 0·59	...	...	...	...	...	...	...	...	...	...
1236	84·55	9	− 64 39 59·38	− 2·231	+ 0·85	...	...	...	443	2350	3351	...	9628	23958	889
1237	84·55	4	− 38 58 8·61	− 2·224	+ 0·60	− 0·03*	−0·01	283*	444	2352	3359	767	9632	23966	890
1238*	84·68	2	− 35 44 27·92	− 2·221	+ 0·59	...	...	...	..	...	...	...	..	...	...
1239	82·27	12	− 12 48 44·69	− 2·188	+ 0·49	− 0·036	−0·10	...	445	2355	3362	769	9637	23983	*900*
1240	82·63	17	+ 6 22 21·23	− 2·102	+ 0·43	...	...	...	...	...	...	...	...	...	...
1241	82·28	11	+ 46 4 5·89	− 2·077	+ 0·25	+ 0·005	+0·01	...	...	...	...	...	...	...	...
1242	82·26	3	− 7 1 31·39	− 1·958	+ 0·47	...	...	...	...	...	...	...	...	24060	...
1243	82·31	29	+ 4 36 58·11	− 1·941	+ 0·43	+ 0·167	+0·45	...	...	2362	...	...	9666	...	*902*
1244	84·58	4	− 40 4 51·78	− 1·788	+ 0·61	...	...	284*	447	2363	3377	772	9675	24107	896
1245	82·61	3	+ 5 45 51·17	− 1·755	+ 0·43	...	...	...	...	...	...	...	...	...	...
1246	82·64	3	+ 5 44 30·52	− 1·720	+ 0·43	...	...	...	...	...	...	...	...	...	...
1247	82·65	3	+ 5 42 18·56	− 1·704	+ 0·43	...	...	...	...	...	...	...	...	...	...
1248*	84·65	2	− 35 29 38·21	− 1·700	+ 0·59	...	...	...	...	...	...	...	...	...	...
1249	82·59	3	+ 5 49 10·28	− 1·656	+ 0·43	...	...	...	...	...	...	...	...	...	...
1250	82·65	2	+ 5 44 9·65	− 1·626	+ 0·43	...	...	...	...	...	...	...	...	...	...
1251	82·35	17	+ 27 47 21·40	− 1·576	+ 0·35	− 0·745	−1·97	...	...	...	...	779	9706	...	897*
1252*	84·60	4	− 37 0 18·09	− 1·570	+ 0·59	+ 0·03*	+0·01	...	449	2371	3387	776	9705	24179	*903*
1253	82·91	24	+ 2 45 5·82	− 1·562	+ 0·44	− 0·056	−0·12	...	...	...	...	...	...	...	*905*
1254	84·65	1	− 35 19 56·32	− 1·386	+ 0·59	...	...	...	...	...	...	...	...	24232	...
1255	82·63	16	+ 5 15 40·05	− 1·275	+ 0·43	...	...	...	...	...	...	...	...	...	...
1256	82·09	4	− 1 12 22·24	− 1·220	+ 0·45	...	...	...	...	...	...	...	...	24274	...
1257	80·56	3	− 28 49 31·89	− 1·192	+ 0·55	...	...	...	...	...	...	...	...	...	...
1258	80·61	3	− 28 59 3·49	− 1·190	+ 0·55	...	...	...	...	...	...	...	...	...	...
1259	82·09	15	− 87 39 38·05	− 1·122	+ 5·20	...	...	...	433	...	3332	766	9725	24176	895*
1260	84·70	1	− 27 58 58·47	− 1·052	+ 0·55	...	...	...	...	...	...	...	...	...	...

1238, 1248. Magnitudes from Cape Observations.

No.	Bradley or Lacaille.	Piazzi.	B.A.C.	Star's Name.	Mag.	Mean Date. 1800+	No. of Obs.	Mean R.A. 1885·0.	Annual Precession. 1885·0.	Secular Variation. 1885·0.	Annual Proper Motion. μ_α.	Corr. for μ_α to 1885·0.
								h m s	s	s	s	s
1261*	...	XVII. 277	6060	M. 703	6·5	81·12	12	17 49 9·110	+ 3·5265	+ 0·003	—0·0008	—0·003
1262	2256	XVII. 309	6082	91 Herculis.....θ	4·0	84·00	6	17 52 18·520	+ 2·0557	+ 0·003	—0·0018	—0·002
1263*	2250	XVII. 303	6078	64 Ophiuchi .....ν	3·5	81·98	52	17 52 41·705	+ 3·3022	+ 0·003	—0·0019	—0·006
1264	2258	XVII. 314	6084	92 Herculis.....ξ	3·9	84·61	4	17 53 17·770	+ 2·3237	+ 0·003	+0·006	+0·002
1265	...	XVII. 307	...	Piazzi XVII. 307.....	6·0	81·65	6	17 53 30·430	+ 3·1848	+ 0·002	...	...
1266*	2259	XVII. 322	6092	67 Ophiuchi	4·0	82·32	19	17 54 53·101	+ 3·0038	+ 0·002	—0·0003	—0·001
1267	2255*	XVII. 321	6097	7 Sagittarii.....	5·4	81·63	7	17 55 48·240	+ 3·6754	+ 0·002	—0·0029	—0·010
1268	7348	...	...	Lacaille 7348	6·5	81·86	13	17 56 4·955	+16·7566	+ 0·048	...	...
1269	...	...	...	B.D. — 21° No. 4836	9·3*	80·55	1	17 57 29·750	+ 3·5932	+ 0·002	...	...
1270	7535	...	6105	Aræ .....θ	3·9	84·54	10	17 57 40·734	+ 4·6712	+ 0·002	—0·002*	—0·001
1271	...	XVII. 342	6111	Piazzi XVII. 342.....	6·5	81·61	6	17 58 7·310	+ 3·6789	+ 0·002	...	...
1272†	2266*	XVII. 343	6115	10 Sagittarii .....γ	2·8	82·67	17	17 58 25·176	+ 3·8575	+ 0·002	—0·0054	—0·013
1273	...	...	...	B.D. — 21° No. 4842	8·5*	80·59	2	17 58 35·310	+ 3·5896	+ 0·002	...	...
1274	...	...	...	Lalande 33147.....	7¾	80·61	1	17 59 57·030	+ 3·5994	+ 0·002	...	...
1275	...	XVII. 356	6125	Piazzi XVII. 356.....	6·7	80·66	2	18 0 17·480	+ 3·5978	+ 0·002	...	...
1276	...	...	...	Lalande 33171.....	8·2*	80·63	3	18 0 27·140	+ 3·5913	+ 0·002	...	...
1277	2273	XVII. 373	6142	71 Ophiuchi	4·8	81·67	6	18 1 48·400	+ 2·8674	+ 0·002	—0·0016	—0·005
1278	2275	XVII. 374	6143	72 Ophiuchi	3·9	81·78	55	18 1 53·860	+ 2·8475	+ 0·002	—0·0056	—0·018
1279†	7581	XVII. 361	6140	Telescopii .....ε	5·2	84·55	10	18 2 41·545	+ 4·4554	+ 0·001	...	...
1280	2281	XVII. 388	6150	103 Herculis .....o	4·0	84·00	4	18 3 3·430	+ 2·3391	+ 0·002	—0·0007	—0·001
1281	...	...	6165	12 Sagittarii.....	7½	80·55	3	18 6 3·430	+ 3·6437	+ 0·001	...	...
1282*	2284	XVIII. 7	6168	13 Sagittarii .....μ	4·1	81·84	26	18 6 53·132	+ 3·5877	+ 0·001	—0·0014	—0·004
1283†	7643	XVIII. 17	6186	Sagittarii .....η	3·3	84·52	6	18 9 50·740	+ 4·0714	— 0·001	—0·010*	—0·005
1284	...	...	...	Lalande 33596.....	6·3*	81·51	6	18 10 18·470	+ 3·0178	+ 0·001	...	...
1285	...	...	6213	B.D. + 7° No. 3629...	5·7	81·50	6	18 13 35·880	+ 2·9034	+ 0·001	...	...
1286†	2294*	XVIII. 32	6209	19 Sagittarii .....δ	2·8	82·79	16	18 13 37·859	+ 3·8390	— 0·001	+0·0014	+0·003
1287	7682	...	6220	Lacaille 7682	6·5	80·57	3	18 14 43·460	+ 3·7962	— 0·001	...	...
1288*	2298	XVIII. 48	6229	58 Serpentis .....η	3·4	81·72	29	18 15 21·689	+ 3·1406	+ 0·001	—0·0400	—0·131
1289†	2297*	XVIII. 46	6233	20 Sagittarii .....ε	2·2	84·58	5	18 16 32·280	+ 3·9867	— 0·002	—0·0043	—0·002
1290†	7694	XVIII. 50	6240	Telescopii .....α	3·5	84·59	6	18 18 26·703	+ 4·4538	— 0·004	0·000*	0·000
1291	2303	XVIII. 58	6247	21 Sagittarii.....	4·9	81·62	12	18 18 30·064	+ 3·5733	— 0·001	—0·0019	—0·006
1292	2311	XVIII. 64	6251	109 Herculis	3·9	84·00	5	18 18 47·812	+ 2·5417	+ 0·002	+0·0131	+0·013
1293†	2310*	XVIII. 66	6263	22 Sagittarii .....λ	3·1	84·00	4	18 20 52·400	+ 3·7070	— 0·001	—0·0052	—0·005
1294*	2313	...	6279	2 H. Scuti	4·7	81·07	15	18 22 38·561	+ 3·4199	0·000	+0·0002	+0·001
1295	2325	XVIII. 104	6307	61 Serpentis .....e	6·3	81·61	7	18 26 0·700	+ 3·0975	0·000	—0·0007	—0·002

1266. ν Ophiuchi in *Ast. Nach.* 2890, *see* No. 1263.
1282. Fundamental Star for Southern Zones.
1272. γ^2 Sagittarii in B.A.C.

No.	Mean Date. 1800+	No. of Obs.	Mean Dec. 1885·0.	Annual Precession. 1885·0.	Secular Variation. 1885·0.	Annual Proper Motion. μ_δ.	Corr. for μ_δ to 1885·0.	Fallows and Henderson.	Johnson.	Cape Catalogues. 1840.	1850.	1860.	1880.	A.G.C. 1875.	Melbourne, 1870 and 1880.
			° ′ ″	″	″	″	″								
1261	81·51	12	− 18 46 50·44	−0·949	+ 0·51	− 0·014	−0·05	...	...	...	3422	...	...	24337	*908*
1262	84·00	6	+ 37 16 0·51	−0·672	+ 0·30	+ 0·024	+0·02	...	...	...	...	...	...	...	...
1263	82·24	29	− 9 45 29·72	−0·639	+ 0·48	− 0·105	−0·29	285	452	...	3437	...	9802	24436	*912*
1264	84·61	4	+ 29 15 39·41	−0·586	+ 0·34	− 0·028	−0·01	...	...	...	...	...	...	...	...
1265	82·24	3	− 4 48 29·98	−0·569	+ 0·46	...	...	...	...	...	...	...	...	24460	...
1266*	82·35	17	+ 2 56 16·94	−0·448	+ 0·44	− 0·005	−0·01	...	...	...	...	...	...	...	*913*
1267	81·92	3	− 24 16 48·37	−0·367	+ 0·54	− 0·004	−0·01	...	...	2398	3447	...	9820	24526	...
1268	82·54	17	− 84 25 14·64	−0·343	+ 2·44	...	...	...	...	...	...	...	9817	24468	...
1269	80·55	1	− 21 16 58·59	−0·219	+ 0·52	...	...	...	...	...	...	...	...	...	...
1270	84·54	10	− 50 5 49·67	−0·203	+ 0·68	− 0·01*	0·00	287	454	2403	3455	794	9836	24574	909
1271	82·27	3	− 24 24 10·71	−0·164	+ 0·54	...	...	...	...	...	3459	...	9845	24587	...
1272*	82·67	17	− 30 25 25·95	−0·139	+ 0·56	− 0·211	−0·49	...	457	2406	3462	797	9852	24596	*915*
1273	80·59	2	− 21 8 51·62	−0·123	+ 0·52	...	...	...	...	...	...	...	...	...	...
1274	80·61	1	− 21 30 53·70	−0·004	+ 0·52	...	...	...	...	...	...	...	...	24634	...
1275	80·66	2	− 21 27 15·80	+0·026	+ 0·52	...	...	...	...	2409	3469	...	...	24638	...
1276	80·63	3	− 21 12 44·20	+0·039	+ 0·52	...	...	...	...	...	...	...	...	...	...
1277	82·27	3	+ 8 43 12·67	+0·158	+ 0·42	+ 0·033	+0·09	...	...	...	...	...	...	...	...
1278	82·07	28	+ 9 32 54·18	+0·166	+ 0·42	+ 0·089	+0·26	...	...	...	...	...	...	...	*916*
1279	84·55	10	− 45 58 21·52	+0·235	+ 0·65	...	...	...	459	2413	3479	...	9889	24703	916
1280	84·00	4	+ 28 44 50·03	+0·267	+ 0·34	+ 0·003	0·00	...	...	...	...	...	...	...	...
1281	80·55	3	− 23 8 37·46	+0·529	+ 0·53	...	...	...	...	...	3496	...	...	24788	...
1282*	82·10	20	− 21 5 15·70	+0·602	+ 0·52	+ 0·001	0·00	288*	460	2418	3498	803	9932	24812	920*
1283	84·52	6	− 36 47 41·21	+0·862	+ 0·59	− 0·04*	−0·02	...	461	2422	3512	808	9962	24888	925
1284	82·20	3	+ 2 20 29·77	+0·901	+ 0·44	...	...	...	...	...	...	...	...	...	...
1285	82·27	3	+ 7 12 51·31	+1·190	+ 0·42	...	...	...	...	...	...	...	...	...	...
1286	82·79	16	− 29 52 32·49	+1·192	+ 0·56	− 0·029	−0·06	...	462	2426	3532	811	9992	24987	927*
1287	80·57	3	− 28 28 52·26	+1·287	+ 0·55	..	...	...	...	...	3540	...	10002	25013	...
1288	81·92	24	− 2 55 37·37	+1·344	+ 0·45	− 0·677	−2·09	...	463	...	3546	...	10008	25031	*928*
1289	84·57	4	− 34 26 14·88	+1·445	+ 0·58	− 0·149	−0·06	290*	464	2432	3548	815	10015	25060	931
1290	84·57	5	− 46 1 48·40	+1·613	+ 0·65	− 0·06*	−0·03	...	465	2436	3551	816	10029	25105	933
1291	82·19	12	− 20 36 7·03	+1·617	+ 0·52	− 0·004	−0·01	291	...	2435	3554	...	...	25108	...
1292	84·00	5	+ 21 43 5·39	+1·643	+ 0·37	− 0·257	−0·26	...	...	...	...	...	...	...	...
1293	84·20	5	− 25 29 2·23	+1·823	+ 0·54	− 0·198	−0·16	...	467	2440	3565	821	10049	25171	936*
1294	81·11	12	− 14 38 16·58	+1·979	+ 0·50	+ 0·003	+0·01	...	470	2445	3580	...	10072	25230	*926*
1295	82·23	3	− 1 5 0·29	+2·272	+ 0·45	0·000	0·00	...	...	2453	3604	829	...	25327	...

No.	Bradley or Lacaille.	Piazzi.	B.A.C.	Star's Name.	Mag.	Mean Date. 1800+	No. of Obs.	Mean R.A. 1885·0.	Annual Precession. 1885·0.	Secular Variation. 1885·0.	Annual Proper Motion. μ_α	Corr. for μ_α to 1885·0.
								h m s	s	s	s	s
1296*	2329	XVIII. 114	6324	Bradley 2329	5·3	81·44	12	18 28 38·857	+ 3·3318	0·000	+0·0016	+0·006
1297	2330	XVIII. 115	6325	3 H. Scuti	4·0	84·55	10	18 28 56·885	+ 3·2664	0·000	—0·0029	—0·001
1298†	7736	...	6315	Pavonis .....ζ	4·2	84·48	10	18 29 35·533	+ 7·0403	— 0·043	—0·004*	—0·002
1299*	2333*	XVIII. 129	6343	Bradley 2333	5·8	82·29	12	18 31 31·002	+ 3·6510	— 0·002	—0·0024	—0·007
1300	7808	...	6345	Lacaille 7808	7½	81·31	3	18 31 58·713	+ 3·7847	— 0·003	...	...
1301	2335	XVIII. 131	6347	Bradley 2335	6·0	81·99	14	18 32 1·958	+ 3·5845	— 0·002	—0·0076	—0·023
1302	2341	XVIII. 143	6355	3 Lyræ .....α	0·2	83·07	15	18 33 2·671	+ 2·0133	+ 0·002	+0·0173	+0·033
1303	...	...	...	.....	9†	80·65	2	18 33 4·550	+ 3·7768	— 0·004	...	...
1304	6295	...	5959	Octantis.....σ	5·8	81·29	21	18 33 30·140	+107·1147	—23·56	+0·1646	+0·611
1305	...	...	...	.....	9†	82·49	7	18 34 9·061	+ 3·7748	— 0·004	...	...
1306	...	...	...	.....	8†	80·65	3	18 34 10·100	+ 3·7773	— 0·004	...	...
1307	...	...	...	.....	9†	80·64	2	18 34 22·860	+ 3·7769	— 0·004	...	...
1308*	2343	XVIII. 157	6367	5 H. Scuti	5·1	81·27	12	18 37 15·493	+ 3·2669	— 0·001	—0·0004	—0·001
1309	2344*	XVIII. 159	6371	27 Sagittarii .....φ	3·3	84·52	4	18 38 28·250	+ 3·7471	— 0·004	+0·0014	+0·001
1310	2351	XVIII. 181	6387	110 Herculis	4·3	84·00	10	18 40 42·710	+ 2·5821	+ 0·001	—0·0030	—0·003
1311*	2350	XVIII. 177	6388	6 H. Scuti	4·4	81·26	17	18 41 4·381	+ 3·1845	— 0·001	—0·0024	—0·009
1312†	7841	...	6383	Pavonis .....λ	4·3	84·56	7	18 41 33·490	+ 5·5790	— 0·028	...	...
1313	...	...	...	.....	8†	80·60	3	18 43 6·010	+ 3·7926	— 0·005	...	...
1314*	2353	XVIII. 196	6407	30 Sagittarii	6·1	81·32	13	18 43 55·719	+ 3·6105	— 0·004	—0·0060	—0·022
1315	2369	XVIII. 215	6429	10 Lyræ (1st star).....β	Var.	82·44	18	18 45 50·044	+ 2·2140	+ 0·001	—0·0007	—0·002
1316	7903	...	6422	Lacaille 7903	7¾	80·58	3	18 45 54·930	+ 3·7660	— 0·005	..	...
1317	2364*	XVIII. 211	6434	32 Sagittarii .....ν¹	5·0	81·67	7	18 47 13·550	+ 3·6248	— 0·004	—0·0028	—0·009
1318	...	...	...	.....	9†	84·71	2	18 47 13·850	+ 3·7675	— 0·006	...	...
1319†	2365*	XVIII. 218	6440	34 Sagittarii .....σ	2·3	83·00	16	18 48 7·978	+ 3·7226	— 0·005	—0·0012	—0·002
1320	...	...	...	Lalande 35235.....	8½	80·68	3	18 50 17·430	+ 3·7547	— 0·006	...	...
1321*	2376	XVIII. 236	6460	63 Serpentis .....θ	4·0*	81·73	53	18 50 30·137	+ 2·9799	0·000	+0·0010	+0·003
1322	2373	XVIII. 233	6461	37 Sagittarii .....ξ²	3·5	84·60	4	18 50 52·110	+ 3·5797	— 0·004	—0·0005	0·000
1323	...	...	...	A.G.C. 25944	6·6	81·29	3	18 51 29·113	+ 3·6171	— 0·005	...	...
1324	2390	XVIII. 262	6487	13 Aquilæ .....ε	4·1	84·00	5	18 54 24·172	+ 2·7263	0·000	—0·0049	—0·005
1325	2392	XVIII. 266	6491	14 Lyræ .....γ	3·3	84·00	1	18 54 38·570	+ 2·2437	+ 0·001	—0·0018	—0·002
1326*	...	XVIII. 260	6488	Piazzi XVIII. 260 ...	6·4	81·65	12	18 54 59·183	+ 3·4312	— 0·004	—0·0001	0·000
1327†	2384*	XVIII. 257	6489	38 Sagittarii .....ζ	3·1	82·89	14	18 55 17·625	+ 3·8233	— 0·008	—0·0040	—0·008
1328	2391	XVIII. 265	6492	12 Aquilæ	4·0	84·60	7	18 55 32·381	+ 3·2065	— 0·002	—0·0048	—0·002
1329	7751	...	...	Lacaille 7751	8½	81·90	19	18 56 3·543	+ 17·6548	— 0·860	...	...
1330	2393	XVIII. 278	6507	39 Sagittarii .....o	3·9	84·51	3	18 57 47·450	+ 3·5931	— 0·005	+0·0029	+0·001

1297. 1 Aquilæ in B.A.C.
1299. Fundamental Star for Southern Zones.
1308. 3 Aquilæ in B.A.C.
1311. 6 Aquilæ in B.A.C.
1314. Fundamental Star for Southern Zones.

No.	Mean Date. 1800+	No. of Obs.	Mean Dec. 1885·0.	Annual Precession. 1885·0.	Secular Variation. 1885·0.	Annual Proper Motion. μ_δ.	Corr. for μ_δ to 1885·0.	Fallows and Henderson.	Johnson.	Cape Catalogues. 1840.	1850.	1860.	1880.	A.G.C. 1875.	Melbourne, 1870 and 1880.
			° ′ ″	″	″	′	″								
1296	81·86	12	— 11 3 56·52	+ 2·500	+ 0·48	— 0·003	—0·01	...	...	...	3616	...	...	25379	*929*
1297*	84·55	10	— 8 19 24·29	+ 2·526	+ 0·47	— 0·307	—0·14	...	...	...	3617	...	...	25382	...
1298	84·48	10	— 71 31 26·91	+ 2·583	+ 1·02	— 0·13*	—0·07	295	472	2455	3611	832	10122	25383	944
1299*	82·29	12	— 23 36 6·07	+ 2·749	+ 0·52	— 0·009	—0·02	...	...	2462	3632	835	10145	25435	*932*
1300	81·31	3	— 28 16 46·77	+ 2·789	+ 0·55	...	...	...	...	...	3634	...	10149	25449	...
1301	82·79	13	— 21 8 44·31	+ 2·794	+ 0·52	— 0·15	—0·33	...	...	2463	3636	...	...	25455	...
1302	83·64	28	+ 38 40 37·64	+ 2·882	+ 0·29	+ 0·295	+0·40	*166*	...	2468	3642	837	10163	...	947*
1303*	80·65	2	— 28 1 53·83	+ 2·883	+ 0·54	...	...	...	...	...	...	...	...	...	...
1304*	81·50	16	— 89 16 16·99	+ 2·919	+15·46	— 0·021	—0·07	275*	423	2302	3348	784	10085	25049	922*
1305*	82·45	6	— 27 58 43·45	+ 2·977	+ 0·54	...	...	...	...	...	...	...	...	...	...
1306*	80·65	3	— 28 3 46·44	+ 2·979	+ 0·54	...	...	...	...	...	...	...	...	...	...
1307*	80·64	2	— 28 3 21·41	+ 2·997	+ 0·54	...	...	...	...	...	...	...	...	...	...
1308*	81·86	12	— 8 23 15·30	+ 3·246	+ 0·47	+ 0·034	+0·11	...	...	...	3650	...	10193	25583	*936*
1309	84·52	4	— 27 6 28·09	+ 3·350	+ 0·54	— 0·019	—0·01	298	475	2474	3654	843	10204	25614	951*
1310	84·00	10	+ 20 26 13·72	+ 3·544	+ 0·37	— 0·348	—0·35	...	...	...	...	...	...	...	...
1311*	81·29	12	— 4 52 10·99	+ 3·574	+ 0·45	— 0·017	—0·06	...	...	...	3667	...	...	25690	*938*
1312	84·56	7	— 62 19 1·84	+ 3·617	+ 0·80	...	...	...	476	2477	3663	845	10227	25692	952
1313*	80·60	3	— 28 44 14·79	+ 3·749	+ 0·54	...	...	...	...	...	...	...	...	...	...
1314*	81·80	12	— 22 17 32·74	+ 3·821	+ 0·52	— 0·028	—0·09	...	...	...	3678	...	...	25767	*940*
1315*	82·35	17	+ 33 13 47·79	+ 3·984	+ 0·31	+ 0·017	+0·05	*164*	...	2487	...	852	10270	...	957*
1316	80·58	3	— 27 53 40·08	+ 3·991	+ 0·54	...	...	...	...	...	3691	...	10268	25826	...
1317	82·14	2	— 22 53 6·25	+ 4·104	+ 0·52	— 0·019	—0·05	...	477	2489	3697	...	10278	25853	...
1318*	84·71	2	— 27 58 27·61	+ 4·104	+ 0·54	...	...	...	...	...	...	...	...	...	...
1319	83·00	16	— 26 26 17·30	+ 4·181	+ 0·53	— 0·067	—0·13	300*	478	2491	3703	853	10284	25874	960*
1320	80·68	3	— 27 36 12·35	+ 4·365	+ 0·53	...	...	...	...	...	...	...	...	25915	*944*
1321	82·24	25	+ 4 3 17·34	+ 4·383	+ 0·42	+ 0·042	+0·12	...	...	...	...	...	10303	...	*945*
1322	84·60	4	— 21 15 23·78	+ 4·414	+ 0·51	— 0·006	0·00	...	480	...	3718	859	10308	25927	...
1323	81·29	3	— 22 40 55·22	+ 4·467	+ 0·51	...	...	...	...	...	...	...	...	25944	...
1324	84·00	5	+ 14 54 46·14	+ 4·715	+ 0·38	— 0·080	—0·08	...	...	...	...	...	10337	...	*947*
1325	84·00	1	+ 32 31 56·97	+ 4·735	+ 0·32	+ 0·005	+0·01	...	...	...	...	...	...	...	...
1326	82·15	12	— 15 26 37·01	+ 4·765	+ 0·49	+ 0·002	+0·01	...	...	...	3729	...	...	26035	*949*
1327	82·89	14	— 30 2 35·44	+ 4·792	+ 0·54	+ 0·009	+0·02	301	481	2503	3730	861	10349	26041	963*
1328	84·60	7	— 5 53 59·49	+ 4·812	+ 0·45	— 0·018	—0·01	...	...	...	3732	...	...	26048	...
1329	82·30	15	— 84 55 0·76	+ 4·857	+ 2·50	...	...	...	...	...	...	...	10343	25992	*948*
1330	84·51	3	— 21 54 32·28	+ 5·003	+ 0·51	— 0·057	—0·03	...	482	2509	3742	...	10365	26102	...

1303. Magnitude from Cape Observations.
1305, 1306, 1307, 1313. Magnitude from Cape Observations.
1318. Magnitude from Cape Observations.

1304. Proper Motion from Newcomb's Catalogue of 1098 Standard Stars.
1315. Limits of magnitude, 3·4–4·5 : Period about $12^{d.}\ 22^{h.}$

No.	Bradley or Lacaille.	Piazzi.	B.A.C.	Star's Name.	Mag.	Mean Date. 1800+	No. of Obs.	Mean R.A. 1885·0.	Annual Precession. 1885·0.	Secular Variation. 1885·0.	Annual Proper Motion. μ_α.	Corr. for μ_α to 1885·0.
								h m s	s	s	s	s
1331	2399	XVIII. 289	6518	15 Aquilæ .....*h*	5·6	81·68	5	18 58 53·340	+ 3·1674	—0·002	—0·0008	—0·003
1332	2405	XVIII. 303	6528	17 Aquilæ .....ζ	3·1	82·24	17	19 0 7·457	+ 2·7578	0·000	—0·0026	—0·007
1333*	2401	XVIII. 298	6526	16 Aquilæ .....λ	3·6	81·88	41	19 0 8·758	+ 3·1866	—0·002	—0·0038	—0·012
1334	8005	...	6532	Lacaille 8005	7·2	81·31	3	19 0 59·567	+ 3·7300	—0·007	...	...
1335	...	...	...	Lalande 35703.....	7·7	82·01	3	19 1 2·380	+ 3·7302	—0·007	...	...
1336	...	...	...	A.G.C. 26220	8½	81·34	3	19 2 45·490	+ 3·7234	—0·008	...	...
1337*	2406	XVIII. 315	6548	41 Sagittarii .....π	3·1	83·13	21	19 2 55·437	+ 3·5717	—0·006	—0·0022	—0·004
1338	...	...	...	A.G.C. 26233	8½	81·33	3	19 3 10·240	+ 3·7174	—0·008	...	...
1339	2410	XVIII. 321	6552	19 Aquilæ	5·3	81·60	7	19 3 21·960	+ 2·9397	—0·001	—0·0021	—0·007
1340*	2415	XIX. 16	6564	20 Aquilæ	5·3	81·38	12	19 6 26·417	+ 3·2554	—0·003	—0·0018	—0·007
1341*	2423	XIX. 35	6584	43 Sagittarii .....*d*	4·9	82·35	30	19 10 54·328	+ 3·5148	—0·006	—0·0024	—0·006
1342	2432	XIX. 57	6595	25 Aquilæ .....ω	5·1	83·55	9	19 12 25·109	+ 2·8164	0·000	—0·0014	—0·002
1343	8075	XIX. 54	6608	Sagittarii .....β^1	4	84·72	2	19 14 22·065	+ 4·3252	—0·020	—0·003*	—0·001
1344	8079	XIX. 62	6610	Sagittarii .....β^2	4·4	84·64	3	19 14 54·523	+ 4·3392	—0·020	+0·004*	+0·001
1345	2434	XIX. 69	6619	44 Sagittarii .....ρ	3·9	84·62	8	19 15 0·174	+ 3·4853	—0·006	—0·0033	—0·001
1346*	2437	XIX. 71	6621	46 Sagittarii .....υ	4·7	81·27	13	19 15 8·428	+ 3·4394	—0·006	—0·0013	—0·005
1347†	8087	XIX. 68	6622	Sagittarii .....α	4·0	84·64	3	19 15 55·000	+ 4·1649	—0·017	...	...
1348	...	...	...	A.G.C. 26615	8¼	80·64	3	19 19 37·210	+ 3·7004	—0·010	...	...
1349*	2451	XIX. 113	6646	30 Aquilæ .....δ	3·5	81·91	53	19 19 41·957	+ 3·0090	—0·002	+0·0153	+0·047
1350	...	...	...	A.G.C. 26626	8½	84·71	2	19 19 52·630	+ 3·7843	—0·011	...	...
1351	2455	XIX. 118	6653	32 Aquilæ .....ν	4·8	81·70	6	19 20 38·150	+ 3·0700	—0·002	—0·0009	—0·003
1352	2467	XIX. 148	6674	6 Vulpeculæ	4·7	84·57	8	19 23 55·190	+ 2·5053	+0·001	—0·0108	—0·005
1353*	2465	XIX. 145	6679	36 Aquilæ .....*e*	5·2	81·19	13	19 24 38·973	+ 3·1383	—0·003	—0·0015	—0·006
1354	2473	XIX. 161	6690	6 Cygni .....β	3·0*	84·00	3	19 26 5·010	+ 2·4189	+0·001	—0·0017	—0·002
1355	2481	XIX. 175	6697	10 Cygni .....ι	3·9	81·71	7	19 26 48·310	+ 1·5116	—0·002	+0·0022	+0·007
1356	8154	XIX. 159	6694	Lacaille 8154	6·9	81·72	6	19 27 37·360	+ 3·6275	—0·010	...	...
1357	...	...	...	Lalande 37011.....	8½	84·72	2	19 28 51·980	+ 3·7562	—0·012	...	...
1358	...	...	...	Lalande 37020.....	7½	84·73	1	19 29 14·540	+ 3·7560	—0·012	...	...
1359*	2478*	XIX. 174	6706	52 Sagittarii .....*h*	4·6	81·88	16	19 29 42·479	+ 3·6523	—0·010	+0·0016	+0·005
1360*	2482	XIX. 187	6713	39 Aquilæ .....κ	4·9	82·63	19	19 30 42·271	+ 3·2300	—0·004	—0·0010	—0·002
1361	2492	XIX. 215	6729	44 Aquilæ .....σ	5·0	81·65	6	19 33 31·110	+ 2·9621	—0·002	—0·0018	—0·006
1362	8094	...	6708	Lacaille 8094	6·9	82·71	21	19 34 46·384	+11·3971	—0·530	0·000*	0·000
1363	2499	XIX. 229	6744	6 Sagittæ .....β	4·4	84·50	9	19 35 52·986	+ 2·6940	0·000	—0·0008	0·000
1364	2501	XIX. 242	6749	47 Aquilæ .....χ	5·4	81·84	7	19 37 9·381	+ 2·8232	—0·001	—0·0018	—0·006
1365*	2504	XIX. 249	6760	56 Sagittarii .....*f*	5·1	81·88	13	19 39 39·203	+ 3·5146	—0·009	—0·0114	—0·036

1337. Fundamental Star for Southern Zones.
1352. α Vulpeculæ in B.A.C.
1359. Fundamental Star for Southern Zones. h^2 Sagittarii in N.A., B.A.C., and A.G.C.
1345. ρ^1 Sagittarii in B.A.C.
1355. ι^2 Cygni in B.A.C.
1365. Fundamental Star for Southern Zones.

No.	Mean Date. 1800+	No. of Obs.	Mean Dec. 1885·0.	Annual Precession. 1885·0.	Secular Variation. 1885·0.	Annual Proper Motion. μ_δ.	Corr. for μ_δ to 1885·0.	Fallows and Henderson.	Johnson.	Cape Catalogues. 1840.	1850.	1860.	1880.	A.G.C. 1875.	Melbourne, 1870 and 1880.
			° ′ ″	″	″	″	″								
1331	82·15	2	− 4 12 5·08	+ 5·096	+ 0·44	− 0·007	−0·02	...	...	...	3750	...	...	26133	...
1332	82·25	16	+ 13 41 36·23	+ 5·200	+ 0·39	− 0·089	−0·24	*143*	...	2515	3757	869	10385	...	970*
1333	82·05	21	− 5 3 13·97	+ 5·203	+ 0·45	− 0·080	−0·24	393*	486	...	3756	...	10384	26159	*952*
1334	81·31	3	− 27 0 46·09	+ 5·273	+ 0·52	...	...	...	...	...	3759	...	10393	26174	...
1335	82·01	3	− 27 1 10·99	+ 5·278	+ 0·52	...	...	...	...	...	3760	...	...	26176	...
1336	81·34	3	− 26 49 53·42	+ 5·423	+ 0·52	...	...	...	...	...	...	...	...	26220	...
1337*	83·13	22	− 21 12 19·00	+ 5·436	+ 0·50	− 0·034	−0·06	304	489	2520	3773	873	10411	26225	*954*
1338	81·32	3	− 26 37 42·93	+ 5·457	+ 0·52	...	...	...	...	...	...	...	...	26233	...
1339	81·64	2	+ 5 53 36·13	+ 5·474	+ 0·41	− 0·064	−0·22	...	...	...	...	...	...	...	...
1340	81·88	12	− 8 7 50·03	+ 5·732	+ 0·45	+ 0·007	+0·02	305	490	...	3783	...	1043	26317	*955*
1341	82·42	23	− 19 9 23·14	+ 6·105	+ 0·48	− 0·004	−0·01	...	491	...	3794	...	10458	26414	*957*
1342	84·00	8	+ 11 23 19·72	+ 6·232	+ 0·39	+ 0·025	+0·03	...	...	...	.	876	10466	...	980*
1343	84·72	2	− 44 40 24·43	+ 6·394	+ 0·60	− 0·02*	−0·01	306	492	2530	3808	878	10486	26485	981
1344	84·64	3	− 45 0 52·78	+ 6·438	+ 0·60	− 0·09*	−0·03	...	...	2532	3811	879	10491	26500	982
1345*	84·62	8	− 18 3 45·57	+ 6·446	+ 0·48	+ 0·026	+0·01	308	493	...	3817	880	10493	26508	...
1346	81·72	12	− 16 10 10·85	+ 6·457	+ 0·47	− 0·009	−0·03	...	...	...	3819	...	...	26510	*960*
1347	84·64	3	− 40 49 51·07	+ 6·522	+ 0·57	...	...	310	494	2536	3820	881	10498	26527	984
1348	80·64	3	− 26 32 42·78	+ 6·827	+ 0·51	...	...	...	...	...	...	...	...	26615	...
1349	82·00	34	+ 2 53 10·91	+ 6·834	+ 0·42	+ 0·091	+0·27	311*	...	2543	3834	885	10522	...	988*
1350	84·71	2	− 29 32 3·73	+ 6·849	+ 0·52	...	...	...	...	...	...	...	...	26626	...
1351	82·29	3	+ 0 6 37·11	+ 6·911	+ 0·42	+ 0·024	+0·07	...	...	...	...	...	...	...	...
1352*	84·59	6	+ 24 25 58·27	+ 7·180	+ 0·34	− 0·102	−0·04	...	...	...	...	...	10545	...	...
1353	81·55	12	− 3 1 39·27	+ 7·240	+ 0·42	+ 0·004	+0·01	...	...	2550	3849	...	...	26737	*963*
1354	84·00	3	+ 27 43 8·19	+ 7·357	+ 0·33	− 0·013	−0·01	...	...	...	...	...	...	...	...
1355*	82·18	11	+ 51 29 11·16	+ 7·415	+ 0·20	+ 0·121	+0·34	...	...	...	...	...	...	...	...
1356	81·73	1	− 24 6 24·67	+ 7·481	+ 0·49	...	...	...	...	...	3860	...	10569	26802	...
1357	84·72	2	− 28 55 10·56	+ 7·583	+ 0·50	...	...	...	...	...	...	...	...	26825	...
1358	84·73	1	− 28 55 36·19	+ 7·613	+ 0·50	...	...	...	...	...	...	...	...	26832	...
1359*	81·88	16	− 25 8 10·43	+ 7·650	+ 0·49	− 0·010	−0·03	...	497	2556	3867	894	10584	26843	994*
1360	82·85	18	− 7 16 56·03	+ 7·731	+ 0·43	+ 0·007	+0·02	315	498	...	3871	...	10590	26865	*966*
1361	82·30	3	+ 5 8 11·41	+ 7·956	+ 0·39	+ 0·004	+0·01	...	...	...	...	...	10609	...	...
1362	83·01	20	− 81 38 3·79	+ 8·059	+ 1·52	+ 0·04*	+0·08	...	...	...	3869	896	10611	26929	995*
1363	84·48	8	+ 17 12 37·87	+ 8·147	+ 0·36	− 0·044	−0·02	...	...	...	...	...	...	...	...
1364	82·30	3	+ 11 33 23·09	+ 8·248	+ 0·37	+ 0·017	+0·05	...	...	...	...	...	...	...	...
1365*	81·88	13	− 20 2 11·16	+ 8·447	+ 0·46	− 0·078	−0·24	...	...	...	3889	902	...	27075	*969*

No.	Bradley or Lacaille.	Piazzi.	B.A.C.	Star's Name.	Mag.	Mean Date. 1800+	No. of Obs.	Mean R.A. 1885·0.	Annual Precession. 1885·0.	Secular Variation. 1885·0.	Annual Proper Motion. μ_α.	Corr. for μ_α to 1885·0.
								h m s	s	s	s	s
1366	2509	XIX. 258	6767	49 Aquilæ .....υ	5·8	81·71	7	19 40 4·280	+ 2·9164	—0·002	+0·0027	+0·009
1367	2511	XIX. 264	6772	50 Aquilæ .....γ	2·8	82·08	27	19 40 47·526	+ 2·8518	—0·001	—0·0005	—0·001
1368	2516	XIX. 279	6783	7 Sagittæ .....δ	3·7	84·00	6	19 42 15·580	+ 2·6747	0·000	—0·0008	—0·001
1369	2515	XIX. 273	6785	Bradley 2515	6·3	82·37	12	19 42 41·698	+ 3·3100	—0·006	+0·003	+0·008
1370*	2519	XIX. 286	6796	51 Aquilæ	5·6	82·02	12	19 44 27·141	+ 3·3069	—0·006	—0·0038	—0·011
1371	2524	XIX. 294	6802	53 Aquilæ .....α	1·0	81·71	14	19 45 10·187	+ 2·8919	—0·001	+0·0351	+0·115
1372	...	...	...	A.G.C. 27218	8	84·73	1	19 46 21·690	+ 3·6878	—0·013	...	...
1373*	2526	XIX. 303	6811	55 Aquilæ .....η	Var.	81·61	26	19 46 36·877	+ 3·0576	—0·003	—0·0017	—0·006
1374†	8219	...	6801	Pavonis .....ϵ	4·0	84·59	5	19 47 16·392	+ 7·0272	—0·165	0·000*	0·000
1375	2538	XIX. 324	6833	60 Aquilæ .....β	4·0	81·52	39	19 49 39·842	+ 2·9451	—0·002	+0·0007	+0·002
1376	2550	XIX. 352	6858	12 Sagittæ .....γ	3·7	84·00	5	19 53 38·628	+ 2·6634	0·000	+0·0030	+0·003
1377	...	...	...	Lalande 38096	7·0*	80·67	3	19 53 48·740	+ 3·5042	—0·010	...	...
1378*	2551	XIX. 360	6871	63 Sagittarii	5·9	81·50	12	19 55 32·008	+ 3·3633	—0·008	+0·0002	+0·001
1379†	2549*	XIX. 355	6870	62 Sagittarii c	4·7	82·66	13	19 55 35·095	+ 3·6955	—0·015	+0·0004	+0·001
1380*	8325	XIX. 369	6878	M. 811	6·4	81·72	12	19 56 55·345	+ 3·5656	—0·012	—0·0053	—0·017
1381†	8295	...	6873	Pavonis .....δ	3·5	84·67	6	19 57 25·787	+ 5·7488	—0·097	+0·193*	+0·064
1382	2564	XIX. 386	6893	63 Aquilæ .....τ	5·6	83·20	13	19 58 31·283	+ 2·9306	—0·002	+0·0003	+0·001
1383*	...	...	...	Lalande 38458.....	7·0	81·34	11	20 1 58·122	+ 3·2157	—0·006	—0·0029	—0·011
1384	...	...	...	Lalande 38517.....	8½	80·66	3	20 3 32·660	+ 3·6138	—0·014	...	...
1385	...	XX. 4	...	Piazzi XX. 4	6·5	80·70	3	20 4 55·880	+ 3·2572	—0·007	...	...
1386*	2576	XX. 10	6934	65 Aquilæ .....θ	3·4	82·03	35	20 5 22·258	+ 3·0956	—0·004	—0·0001	0·000
1387	2577	XX. 16	6938	2 Capricorni .....ξ	6·0	81·88	6	20 6 1·388	+ 3·3346	—0·008	+0·0108	+0·034
1388	2603	XX. 62	6965	31 Cygni (2nd star) ...o^1	3·8	82·14	7	20 10 0·623	+ 1·8887	0·000	—0·0004	—0·001
1389*	2591	XX. 53	6971	4 Capricorni	6·0	82·12	11	20 11 15·942	+ 3·5301	—0·013	—0·0002	—0·001
1390	2593	XX. 54	6972	5 Capricorni .....α^1	4·5	82·96	18	20 11 16·353	+ 3·3290	—0·008	—0·0008	—0·002
1391*	2595	XX. 58	6974	6 Capricorni.....α^2	3·8	82·43	19	20 11 40·378	+ 3·3295	—0·009	+0·0022	+0·006
1392	2606	XX. 70	6979	24 Vulpeculæ	5·5	84·62	1	20 11 51·760	+ 2·5655	+0·001	+0·0004	0·000
1393*	2609	XX. 83	6995	9 Capricorni .....β	3·4	82·55	12	20 14 32·877	+ 3·3737	—0·010	+0·0008	+0·002
1394	8257	...	...	Lacaille 8257	7·0	81·94	24	20 14 59·922	+15·2732	—1·638	...	...
1395†	8416	...	7004	Pavonis .....α	2·1	84·00	12	20 16 32·563	+ 4·7830	—0·060	+0·0037	+0·004
1396	...	...	7014	Lalande 39176.....	5·4	81·69	6	20 17 28·820	+ 2·9763	—0·003	...	...
1397	...	...	...	W.B. XX. 387	8·0*	83·67	3	20 17 42·750	+ 3·3426	—0·009	...	...
1398	2624	XX. 124	7022	37 Cygni .....γ	2·3	81·60	15	20 18 6·036	+ 2·1518	+0·002	—0·0001	0·000
1399	8360	...	6993	Lacaille 8360	6·5	83·33	23	20 18 46·807	+10·5840	—0·692	...	...
1400	...	...	...	B. D. — 13° No. 5667	9·4*	83·71	3	20 19 6·820	+ 3·3412	—0·009	...	...

1380. Fundamental Star for Southern Zones.
1388. o^2 Cygni in B.A.C.
1387. ξ^1 Capricorni in B.A.C.
1389. Fundamental Star for Southern Zones.

No.	Mean Date. 1800+	No. of Obs.	Mean Dec. 1885·0.	Annual Precession. 1885·0.	Secular Variation. 1885·0.	Annual Proper Motion. μ_δ.	Corr. for μ_δ to 1885·0.	Fallows and Henderson.	Johnson.	Cape Catalogues. 1840.	1850.	1860.	1880.	A.G.C. 1875.	Melbourne, 1870 and 1880.
			° ′ ″	″	″	″	″								
1366	81·69	1	+ 7 20 5·84	+ 8·480	+ 0·38	− 0·003	−0·01	...	...	...	...	...	..	...	...
1367	82·35	20	+ 10 20 1·70	+ 8·538	+ 0·37	+ 0·008	+0·02	318*	...	2571	3893	905	10650	...	1000*
1368	84·00	5	+ 18 15 4·82	+ 8·654	+ 0·35	+ 0·031	+0·03	...	...	...	...	...	...	...	...
1369	82·37	12	− 11 9 20·35	+ 8·688	+ 0·43	+ 0·008	+0·02	...	...	...	3902	...	...	27134	...
1370	82·25	12	− 11 3 15·66	+ 8·826	+ 0·43	+ 0·057	+0·16	...	...	...	3909	...	...	27177	973
1371	83·59	34	+ 8 33 54·79	+ 8·883	+ 0·37	+ 0·384	+0·54	320*	...	2580	3913	909	10682	...	1001*
1372	84·73	1	− 27 14 18·64	+ 8·977	+ 0·48	...	...	...	...	...	...	...	...	27218	...
1373*	82·00	15	+ 0 42 40·93	+ 8·996	+ 0·39	− 0·003	−0·01	...	...	...	...	...	10690	...	975
1374	84·59	5	− 73 12 42·06	+ 9·047	+ 0·91	− 0·13*	−0·05	...	501	2576	3912	910	10694	27225	1002*
1375	81·67	27	+ 6 7 14·80	+ 9·234	+ 0·38	− 0·473	−1·58	322*	...	2587	3931	915	10712	...	1008*
1376	84·00	5	+ 19 10 50·35	+ 9·542	+ 0·34	+ 0·037	+0·04	...	...	...	...	...	...	...	...
1377	80·67	3	− 20 10 13·65	+ 9·555	+ 0·44	...	...	...	...	...	...	...	...	...	...
1378	81·93	12	− 13 57 16·90	+ 9·686	+ 0·43	+ 0·025	+0·08	...	...	...	3947	...	...	27431	981
1379	82·67	14	− 28 1 42·65	+ 9·690	+ 0·47	+ 0·024	+0·06	323	505	2591	3946	921	10762	27430	1010*
1380*	81·71	12	− 22 55 2·22	+ 9·792	+ 0·45	+ 0·030	+0·10	...	...	...	3952	...	10773	27461	983
1381	84·67	6	− 66 28 22·63	+ 9·830	+ 0·73	− 1·23*	−0·41	...	504	2592	3949	924	10776	27468	1012
1382	83·82	10	+ 6 57 15·32	+ 9·914	+ 0·37	+ 0·036	+0·04	...	...	2595	...	...	...	...	...
1383	81·67	11	− 7 5 35·00	+10·175	+ 0·40	+ 0·006	+0·02	...	...	...	...	...	...	27565	986
1384	80·66	3	− 25 15 42·01	+10·293	+ 0·45	...	...	...	...	...	...	...	...	...	...
1385	80·70	3	− 9 10 54·76	+10·397	+ 0·40	...	...	...	...	...	...	...	...	27633	...
1386	82·20	30	− 1 9 42·32	+10·431	+ 0·38	+ 0·014	+0·04	325	507	...	3986	...	10825	27648	988
1387*	82·32	3	− 12 57 12·04	+10·479	+ 0·41	− 0·180	−0·48	...	...	...	3988	...	...	27670	...
1388*	82·50	12	+ 46 23 35·51	+10·776	+ 0·23	+ 0·002	+0·01	...	...	2608	...	...	...	...	...
1389*	82·16	12	− 22 9 50·96	+10·868	+ 0·43	− 0·027	−0·08	...	...	...	4005	941	...	27794	992
1390	83·39	20	− 12 51 45·82	+10·868	+ 0·40	+ 0·026	+0·04	108	508	2609	4006	...	10861	27796	1029*
1391	82·48	19	− 12 54 1·32	+10·897	+ 0·40	+ 0·017	+0·04	326*	509	2610	4007	942	10864	27800	1030*
1392	84·62	1	+ 24 19 2·39	+10·912	+ 0·31	− 0·032	−0·01	...	...	...	...	...	...	...	...
1393	82·55	12	− 15 8 37·18	+11·108	+ 0·40	+ 0·022	+0·05	328	511	2612	4018	946	10888	27880	998
1394	82·18	14	− 84 47 37·91	+11·140	+ 1·85	...	...	...	...	...	...	...	10885	27838	...
1395*	84·00	15	− 57 6 7·42	+11·254	+ 0·57	− 0·091	−0·09	329*	512	2613	4020	948	10899	27918	1033*
1396	82·31	3	+ 4 58 34·58	+11·321	+ 0·35	...	...	...	...	...	...	...	...	...	...
1397	83·67	3	− 13 45 56·70	+11·338	+ 0·40	...	...	...	...	...	...	...	...	...	...
1398	81·60	15	+ 39 53 21·07	+11·366	+ 0·25	+ 0·020	+0·07	...	...	2616	...	953	...	...	...
1399	83·38	26	− 81 40 29·10	+11·415	+ 1·26	...	...	...	...	...	4017	...	10907.	27956	1035*
1400	83·71	3	− 13 45 21·59	+11·439	+ 0·40	...	...	...	...	...	...	...	...	...	...

1373. Limits of magnitude, 3·5–4·7: Period $7^{d.}$ $4^{h.}$ $14^{m.}$
1395. Proper Motion from Newcomb's Catalogue of 1098 Standard Stars.

No.	Bradley or Lacaille.	Piazzi.	B.A.C.	Star's Name.	Mag.	Mean Date. 1800+	No. of Obs.	Mean R.A. 1885·0.	Annual Precession. 1885·0.	Secular Variation. 1885·0.	Annual Proper Motion. μ_a.	Corr. for μ_a to 1885·0.
								h m s	s	s	s	s
1401	...	...	...	B.D. — 14° No. 5738	8·5*	83·68	3	20 19 14·620	+3·3449	+0·009	...	...
1402	...	...	...	B.D. — 14° No. 5742	8·3*	83·71	4	20 19 52·610	+3·3440	—0·009	...	...
1403	2623	XX. 131	7031	10 Capricorni.....π	5·2	84·59	4	20 20 44·270	+3·4399	—0·012	—0·0009	0·000
1404	...	...	...	Lalande 39303.....	8·5*	83·70	5	20 20 49·550	+3·3432	—0·009	...	...
1405*	2626	XX. 142	7042	11 Capricorni.....ρ	5·0	81·56	27	20 22 18·001	+3·4298	—0·012	—0·0026	—0·009
1406	2627	XX. 144	7044	Bradley 2627	7	80·59	1	20 22 26·590	+3·4309	—0·011	—0·0013	—0·006
1407	...	...	7063	A.G.C. 28122	6·2	81·65	6	20 24 37·660	+3·3707	—0·010	...	...
1408	8461	...	7066	Pavonis.....ϕ^1	4·9	84·74	3	20 26 3·020	+5·0083	—0·077	...	...
1409*	...	XX. 174	7080	M. 842	5·6	81·84	12	20 26 6·043	+3·2666	—0·008	+0·0199	+0·063
1410	2642	XX. 191	7088	2 Delphini.....ϵ	4·1	81·64	45	20 27 43·110	+2·8663	—0·001	—0·0006	—0·002
1411†	8494	...	7096	Indi.....α	3·1	84·73	4	20 29 28·470	+4·2398	—0·040	0·000*	0·000
1412*	2649	XX. 212	7109	70 Aquilæ	5·3	81·68	12	20 30 44·290	+3·1269	—0·005	—0·0003	—0·001
1413	2656	XX. 227	7121	6 Delphini .....β	3·7	84·00	6	20 32 9·373	+2·8060	0·000	+0·0057	+0·006
1414	2652	XX. 225	7127	14 Capricorni .....τ	5·3	80·73	3	20 32 50·400	+3·3609	—0·011	—0·0012	—0·005
1415	...	XX. 229	...	Piazzi XX. 229	8¼	82·01	3	20 33 6·853	+3·3611	—0·011	...	...
1416*	2657	XX. 233	7134	15 Capricorni.....υ	5·3	82·06	16	20 33 30·142	+3·4240	—0·012	—0·0034	—0·010
1417	2663	XX. 242	7141	7 Delphini.....κ	5·1	84·62	2	20 33 32·560	+2·8936	—0·002	+0·0197	+0·007
1418†	8500	...	7129	Pavonis .....β	3·3	84·53	3	20 34 34·793	+5·4871	—0·116	—0·009*	—0·004
1419	2679	XX. 285	7171	50 Cygni.....α	1·5	81·33	9	20 37 30·643	+2·0437	+0·002	—0·0003	—0·001
1420	...	...	...	Lalande 40029.....	6·8*	81·66	6	20 37 57·090	+2·9826	—0·003	...	...
1421	2678	XX. 281	7173	11 Delphini.....δ	4·6	84·71	8	20 38 5·365	+2·8026	0·000	—0·0025	—0·001
1422	2686	XX. 304	7200	12 Delphini.....γ	4·0†	84·71	3	20 41 19·250	+2·7857	0·000	—0·0034	—0·001
1423*	2681	XX. 299	7196	2 Aquarii .....ϵ	3·8	81·42	57	20 41 26·998	+3·2505	—0·008	—0·0002	—0·001
1424	...	...	...	B.D. — 21° No. 5839	8·5*	80·76	2	20 42 17·960	+3·4631	—0·014	...	...
1425	...	...	...	B.D. — 21° No. 5840	8·0*	81·38	3	20 42 35·937	+3·4628	—0·014	...	...
1426	2692	XX. 323	7213	54 Cygni.....λ	4·6	84·00	2	20 42 55·750	+2·3345	+0·003	—0·0011	—0·001
1427	...	...	...	B.D. — 21° No. 5843	9·1*	80·68	1	20 43 10·110	+3·4615	—0·014	...	...
1428†	2690*	XX. 328	7227	18 Capricorni.....ω	4·4	81·07	14	20 44 57·395	+3·5924	—0·018	—0·0027	—0·011
1429†	8584	...	7228	Indi.....β	3·7	84·65	5	20 45 48·802	+4·7326	—0·074	...	...
1430	2696	XX. 345	7239	6 Aquarii .....μ	4·8	84·67	8	20 46 27·005	+3·2381	—0·008	+0·0008	0·000
1431*	2700	XX. 362	7249	19 Capricorni	6·0	81·08	18	20 48 17·919	+3·4017	—0·013	—0·0058	—0·023
1432	2709	XX. 379	7256	32 Vulpeculæ	5·1	84·00	5	20 49 39·520	+2·5560	+0·003	—0·0016	—0·002
1433†	8570	...	7250	Octantis.....α	5·6	83·01	22	20 50 44·610	+7·4906	—0·359	—0·001*	—0·002
1434	...	XX. 386	7263	Piazzi XX. 386	6·0	81·73	6	20 51 14·280	+3·3624	—0·012	+0·0046	+0·015
1435*	2723	XX. 414	7284	11 Aquarii	6·3	80·81	21	20 54 30·447	+3·1600	—0·007	+0·0021	+0·009

1414. τ^2 Capricorni in B.A.C.

No.	Mean Date. 1800+	No. of Obs.	Mean Dec. 1885·0.	Annual Precession. 1885·0.	Secular Variation. 1885·0.	Annual Proper Motion. μ_δ.	Corr. for μ_δ to 1885·0.	Fallows and Henderson.	Johnson.	Cape Catalogues. 1840.	1850.	1860.	1880.	A.G.C. 1875.	Melbourne, 1870 and 1880.
			° ′ ″	″	″	″	″								
1401	83·68	3	− 13 56 33·74	+11·449	+ 0·39	...	...	...	...	...	...	...	...	...	...
1402	83·71	4	− 13 55 30·09	+11·494	+ 0·39	...	...	...	...	...	...	...	...	...	...
1403	84·59	4	− 18 35 15·99	+11·555	+ 0·41	+ 0·012	+0·00	330	513	2617	4037	...	...	28036	...
1404	83·70	5	− 13 55 15·08	+11·562	+ 0·39	...	...	..	...	...	...	...	...	...	...
1405	81·60	20	− 18 11 34·78	+11·666	+ 0·40	− 0·007	−0·02	331	514	...	4045	959	10934	28073	1038*
1406	80·59	1	− 18 15 5·57	+11·676	+ 0·40	− 0·12	−0·53	...	...	...	4047	...	...	28080	1039
1407	82·33	3	− 15 26 22·19	+11·832	+ 0·39	...	...	...	...	...	4059	...	...	28122	...
1408	84·74	3	− 60 58 3·67	+11·932	+ 0·58	...	...	...	...	2627	4061	...	10952	28140	...
1409	81·84	12	− 10 14 41·63	+11·935	+ 0·38	+ 0·095	+0·30	...	...	...	4072	...	...	28149	*1011*
1410	81·88	26	+ 10 54 46·98	+12·049	+ 0·33	− 0·022	−0·07	...	...	...	...	...	10970	...	*1012*
1411	84·73	4	− 47 41 28·87	+12·171	+ 0·49	+ 0·04*	+0·01	335*	516	2630	4079	968	10981	28213	1046
1412	81·68	12	− 2 56 50·90	+12·259	+ 0·36	+ 0·003	+0·01	...	...	...	4085	...	...	28248	*1016*
1413	84·00	6	+ 14 11 43·87	+12·357	+ 0·32	− 0·031	−0·03	...	...	...	...	...	...	...	...
1414*	80·73	3	− 15 21 25·38	+12·404	+ 0·38	− 0·012	−0·05	...	...	...	4096	972	...	28298	...
1415	82·01	3	− 15 22 42·98	+12·423	+ 0·38	...	...	...	...	...	...	...	...	28309	...
1416	82·38	15	− 18 32 33·62	+12·449	+ 0·39	+ 0·013	+0·03	...	520	2635	4101	974	...	28317	*1017*
1417	84·62	2	+ 9 40 54·80	+12·453	+ 0·33	+ 0·012	0·00	...	...	...	...	...	...	...	...
1418	84·53	3	− 66 36 53·39	+12·524	+ 0·62	− 0·06*	−0·03	338*	518	2634	4098	975	11021	28338	1049*
1419	81·42	12	+ 44 52 12·61	+12·723	+ 0·22	+ 0·003	+0·01	*168*	...	2640	4118	981	11042	...	1055*
1420	82·30	3	+ 4 58 37·41	+12·753	+ 0·33	...	...	...	...	...	...	...	...	...	...
1421	84·70	7	+ 14 39 45·14	+12·761	+ 0·31	− 0·036	−0·01	...	...	...	...	...	...	...	...
1422*	84·71	3	+ 15 42 37·08	+12·978	+ 0·31	− 0·196	−0·06	...	...	...	...	...	...	...	...
1423	81·84	26	− 9 54 57·48	+12·987	+ 0·36	− 0·027	−0·09	341	522	...	4133	...	11066	28511	*1024*
1424	80·76	2	− 21 2 32·77	+13·044	+ 0·38	...	...	...	...	...	...	...	...	...	...
1425	81·38	3	− 21 2 55·15	+13·064	+ 0·38	...	...	...	...	...	...	...	...	...	...
1426	84·00	2	+ 36 4 5·81	+13·086	+ 0·25	+ 0·018	+0·02	...	...	2649	...	...	...	...	...
1427	80·68	1	− 21 1 46·44	+13·101	+ 0·38	...	...	...	...	...	...	...	...	...	...
1428	81·69	11	− 27 20 54·39	+13·219	+ 0·39	+ 0·003	+0·01	...	...	...	4148	986	11093	28598	...
1429	84·65	5	− 58 53 12·25	+13·276	+ 0·51	...	...	344	525	2651	4149	987	11097	28615	1060
1430	84·67	8	− 9 24 51·31	+13·317	+ 0·35	− 0·031	−0·01	...	526	2653	4158	...	11107	28640	...
1431	81·19	12	− 18 21 29·09	+13·438	+ 0·36	− 0·003	−0·01	...	...	...	4165	990	...	28675	*1026*
1432	84·00	5	+ 27 37 14·62	+13·526	+ 0·27	− 0·002	0·00	...	...	...	...	994	11131	...	1063*
1433	83·30	24	− 77 27 36·68	+13·596	+ 0·80	− 0·40*	−0·68	...	...	2654	4166	...	11135	28706	1062*
1434*	82·32	3	− 16 28 22·92	+13·627	+ 0·35	− 0·029	−0·08	...	...	...	4170	...	...	28725	...
1435	81·06	16	− 5 10 24·91	+13·836	+ 0·33	− 0·140	−0·55	...	...	...	4180	...	...	28795	*1033*

1422. Magnitude from Struve's *Mensuræ Micrometricæ*.

1434. Proper Motion from Newcomb's Catalogue of 1098 Standard Stars.

No.	Bradley or Lacaille.	Piazzi.	B.A.C.	Star's Name.	Mag.	Mean Date. 1800+	No. of Obs.	Mean R.A. 1885·0.	Annual Precession. 1885·0.	Secular Variation. 1885·0.	Annual Proper Motion. μ_α.	Corr. for μ_α to 1885·0.
								h m s	s	s	s	s
1436	2729	XX. 436	7305	22 Capricorni ....η	5·2	81·69	6	20 57 51·550	+ 3·4255	— 0·014	—0·0050	—0·017
1437	2733	XX. 451	7322	23 Capricorni .....θ	4·3	84·00	11	20 59 28·897	+ 3·3746	— 0·013	+0·0040	+0·004
1438	2746	XX. 472	7333	62 Cygni .....ξ	3·7	80·13	8	21 0 44·900	+ 2·1792	+ 0·004	+0·0006	+0·003
1439	2744	XX. 475	7336	61 Cygni (1st star).....	5·0	84·00	4	21 1 44·240	+ 2·3346	+ 0·004	+0·3444	+0·344
1440	...	...	...	B. D. — 19° No. 6028	8·3*	84·81	3	21 2 20·170	+ 3·3981	— 0·014	...	...
1441*	2747	XX. 485	7344	13 Aquarii .....ν	4·6	81·98	38	21 3 19·717	+ 3·2676	— 0·010	+0·0043	+0·013
1442	...	...	...	B. D. — 19° No. 6038	8·7*	84·80	2	21 3 53·220	+ 3·3910	— 0·014	...	...
1443	2753*	XXI. 12	7357	3 Piscis Australis	5·7	81·72	6	21 6 28·040	+ 3·5625	— 0·020	+0·0061	+0·020
1444	2760	XXI. 35	7368	64 Cygni .....ζ	3·5	81·21	19	21 8 2·527	+ 2·5513	+ 0·004	—0·0015	—0·006
1445	...	...	...	Lalande 41168.....	8·7*	80·72	3	21 8 10·060	+ 3·3101	— 0·011	...	...
1446	...	...	...	B. D. — 18° No. 5893	8·8*	84·80	4	21 8 41·130	+ 3·3779	— 0·014	...	...
1447	2761	XXI. 38	7372	7 Equulei .....δ	4·6	84·71	6	21 8 52·695	+ 2·9198	— 0·001	+0·0012	0·000
1448*	2764	XXI. 47	7380	8 Equulei .....α	4·1	81·05	46	21 10 4·484	+ 2·9970	— 0·003	+0·0021	+0·008
1449	2767	XXI. 54	7385	65 Cygni .....τ	3·9	84·69	2	21 10 11·990	+ 2·3786	+ 0·005	+0·0121	+0·004
1450	...	...	...	B. D. — 18° No. 5910	9·5*	84·81	2	21 13 19·670	+ 3·3632	— 0·013	...	...
1451*	2771	XXI. 81	7404	16 Aquarii.....	5·9	80·92	15	21 15 2·533	+ 3·1502	— 0·007	—0·0031	—0·013
1452	2780	XXI. 100	7418	1 Pegasi	4·3	82·88	18	21 16 46·051	+ 2·7662	+ 0·002	+0·0064	+0·014
1453	...	...	...	Lalande 41514.....	8·5*	84·72	2	21 16 52·050	+ 3·3932	— 0·015	...	...
1454†	8778	...	7409	Pavonis .....γ	4·5	84·70	6	21 16 55·210	+ 5·0230	— 0·120	+0·019*	+0·006
1455	2778	XXI. 99	7425	33 Capricorni	5·6	80·42	12	21 17 38·226	+ 3·4122	— 0·015	—0·0032	—0·015
1456	6460	...	7020	Octantis.....B	6·7	82·57	18	21 18 42·332	+83·3973	—112·87	—0·130*	—0·316
1457	...	...	...	B. D. — 17° No. 6267	9·6*	84·81	2	21 20 4·800	+ 3·3376	— 0·013	...	...
1458*	2785*	XXI. 118	7445	34 Capricorni .....ζ	3·8	82·22	17	21 20 6·021	+ 3·4354	— 0·017	—0·0013	—0·004
1459	...	XXI. 145	7463	Piazzi XXI. 145	6·6	81·71	6	21 23 32·260	+ 3·3736	— 0·014	...	...
1460*	2797	XXI. 162	7478	22 Aquarii .....β	3·1	81·51	67	21 25 30·261	+ 3·1612	— 0·007	—0·0006	—0·002
1461	8843	XXI. 161	7479	Lacaille 8843	6·5	81·76	6	21 25 55·630	+ 3·4624	— 0·018	...	...
1462†	8817	...	7481	Octantis.....ν	3·8	84·70	4	21 28 38·343	+ 6·8977	— 0·390	...	...
1463	2802*	XXI. 188	7500	8 Piscis Australis	5·8	81·82	7	21 29 30·764	+ 3·4826	— 0·020	+0·0061	+0·019
1464*	2806	XXI. 197	7506	39 Capricorni .....ϵ	4·5	82·69	12	21 30 38·370	+ 3·3672	— 0·015	—0·0009	—0·002
1465	...	...	...	B. D. — 8° No. 5696..	8·3*	80·70	3	21 31 0·510	+ 3·1909	— 0·008	...	...
1466	...	...	...	Lalande 42073...	7·7*	80·75	3	21 31 7·530	+ 3·2439	— 0·010	...	...
1467	2808	XXI. 209	7514	23 Aquarii .....ξ	4·8	82·87	18	21 31 37·742	+ 3·1910	— 0·008	+0·0058	+0·012
1468	2818	XXI. 222	7521	74 Cygni	5·1	84·00	3	21 32 20·440	+ 2·4010	+ 0·007	—0·0010	—0·001
1469	8798	...	7498	Octantis.....λ	5·7	82·93	26	21 33 9·663	+ 9·8202	— 1·097	0·000*	0·000
1470	...	...	...	Lalande 42160.....	6·3	80·75	3	21 33 17·260	+ 3·2290	— 0·010	...	...

1456. B.A.C. gives no letter.

1458. Fundamental Star for Southern Zones.

No.	Mean Date. 1800+	No. of Obs.	Mean Dec. 1885·0.	Annual Precession. 1885·0.	Secular Variation. 1885·0.	Annual Proper Motion. μ_δ.	Corr. for μ_δ to 1885·0.	Fallows and Henderson.	Johnson.	Cape Catalogues. 1840.	1850.	1860.	1880.	A.G.C. 1875.	Melbourne, 1870 and 1880.
			° ′ ″	″	″	″	″								
1436	82·16	2	− 20 18 31·60	+14·046	+ 0·35	− 0·037	−0·11	348	527	2669	4193	1002	11187	28879	...
1437	84·00	11	− 17 41 20·86	+14·148	+ 0·34	− 0·054	−0·05	...	...	2673	4203	1006	11204	28921	*1035*
1438	81·00	12	+ 43 28 11·67	+14·226	+ 0·22	− 0·008	−0·03	...	...	2677	...	1008	...	...	*1036*
1439	84·00	4	+ 38 11 1·24	+14·287	+ 0·23	+ 3·230	+3·23	...	...	2679	4213	1011	...	...	1072*
1440	84·81	3	− 19 11 26·25	+14·324	+ 0·34	...	...	...	...	...	...	...	...	...	...
1441	82·44	28	− 11 50 11·57	+14·385	+ 0·33	− 0·007	−0·02	349	528	2681	4221	1014	11238	29024	*1038*
1442	84·80	2	− 18 55 30·49	+14·418	+ 0·34	...	...	...	...	...	...	...	...	...	...
1443	82·34	3	− 28 5 14·18	+14·574	+ 0·35	− 0·109	−0·29	...	...	...	4229	...	11256	29093	...
1444	82·00	14	+ 29 45 20·58	+14·669	+ 0·25	− 0·066	−0·20	*162*	...	2686	...	1019	11269	...	1076*
1445	80·72	3	− 14 37 17·58	+14·676	+ 0·32	...	...	...	...	...	...	...	...	...	...
1446	84·80	4	− 18 34 45·48	+14·707	+ 0·33	...	...	...	...	...	...	...	...	...	...
1447	84·71	6	+ 9 32 29·21	+14·719	+ 0·28	− 0·289	−0·08	...	...	...	...	...	11274	...	...
1448	81·67	21	+ 4 46 23·14	+14·789	+ 0·29	− 0·078	−0·26	...	...	.	...	...	11283	...	*1043*
1449	84·69	2	+ 37 33 18·52	+14·797	+ 0·23	+ 0·460	+0·14	...	...	...	...	...	...	...	...
1450	84·80	3	− 18 7 12·09	+14·981	+ 0·32	...	...	...	...	...	...	...	...	...	...
1451	82·15	12	− 5 2 51·04	+15·079	+ 0·30	+ 0·004	+0·01	...	...	...	4259	...	...	29282	*1048*
1452	82·74	19	+ 19 18 46·55	+15·179	+ 0·26	+ 0·075	+0·17	...	...	...	...	...	...	...	...
1453	84·72	2	− 20 10 16·17	+15·184	+ 0·32	...	...	...	...	...	...	...	...	...	...
1454	84·70	6	− 65 53 7·41	+15·187	+ 0·47	+ 0·83*	+0·25	353*	531	2694	4264	1029	11336	29309	1083
1455	82·29	12	− 21 20 23·89	+15·228	+ 0·32	− 0·115	−0·31	...	...	...	4274	...	11343	29326	...
1456*	82·71	11	− 89 23 0·15	+15·296	+ 7·87	− 0·01*	−0·02	...	496	2590	4030	982	11301	29042	1067*
1457	84·81	2	− 17 9 25·55	+15·367	+ 0·31	...	...	...	...	...	...	...	...	...	...
1458*	82·47	17	− 22 54 31·13	+15·367	+ 0·32	+ 0·013	+0·03	356	534	2705	4288	1033	11360	29382	*1052*
1459	82·35	3	− 19 38 56·32	+15·559	+ 0·30	...	...	...	...	...	4299	...	...	29464	...
1460	82·14	43	− 6 4 35·40	+15·667	+ 0·28	− 0·001	0·00	357*	535	2707	4307	1037	11389	29491	1089*
1461	82·45	3	− 25 5 52·45	+15·690	+ 0·31	...	...	...	...	2708	4308	...	11391	29496	...
1462	84·70	4	− 77 53 56·52	+15·837	+ 0·61	...	...	...	...	2709	4309	...	11401	29533	...
1463	82·40	3	− 26 41 1·00	+15·883	+ 0·30	− 0·025	−0·07	...	...	2713	4318	...	11408	29577	...
1464	82·69	12	− 19 58 50·43	+15·943	+ 0·29	− 0·003	−0·01	...	536	2714	4320	1041	11417	29598	*1057*
1465	80·70	3	− 8 19 50·50	+15·962	+ 0·27	...	...	...	...	...	...	...	...	...	...
1466	80·75	3	− 11 58 31·79	+15·969	+ 0·28	...	...	...	...	...	...	...	...	...	...
1467	83·37	14	− 8 22 9·80	+15·995	+ 0·27	− 0·022	−0·04	358	537	...	4324	1042	11421	29613	...
1468	84·00	3	+ 39 53 49·88	+16·033	+ 0·20	+ 0·009	+0·01	...	...	...	...	...	11432	...	...
1469	83·40	22	− 83 14 44·96	+16·077	+ 0·85	0·00*	0·00	...	..	...	4316	1040	11435	29624	1092*
1470	80·75	3	− 11 5 38·71	+16·082	+ 0·27	...	...	...	...	...	...	...	...	29650	...

No.	Bradley or Lacaille.	Piazzi.	B.A.C.	Star's Name.	Mag.	Mean Date. 1800+	No. of Obs.	Mean R.A. 1885·0.	Annual Precession. 1885·0.	Secular Variation. 1885·0.	Annual Proper Motion. μ_a.	Corr. for μ_a to 1885·0.
								h m s	s	s	s	s
1471*	2815	XXI. 223	7525	40 Capricorni ..... γ	3·8	81·40	16	21 33 43·055	+ 3·3187	— 0·013	+0·0119	+0·043
1472†	2819*	XXI. 234	7539	41 Capricorni	5·2	81·66	6	21 35 27·720	+ 3·4198	— 0·017	+0·0055	+0·018
1473	...	...	...	B.D. — 15° No. 6043	8·8*	84·82	3	21 36 25·500	+ 3·2950	— 0·012	...	...
1474	...	...	...	B.D. — 18° No. 5998	8·2*	80·74	3	21 37 10·680	+ 3·3246	— 0·013	...	...
1475	2835	XXI. 260	7561	8 Pegasi .....ε	2·4	81·10	46	21 38 32·232	+ 2·9450	0·000	+0·0008	+0·003
1476	...	...	...	A.G.C. 29748	7¾	82·68	7	21 38 45·960	+ 3·9285	— 0·047	...	...
1477	2834	XXI. 258	7563	46 Capricorni .....c^1	5·2	81·79	6	21 38 52·290	+ 3·2032	— 0·009	—0·0023	—0·007
1478	2848	XXI. 269	7571	10 Pegasi .....κ	4·2	84·71	6	21 39 26·193	+ 2·7116	+ 0·005	0·000	0·000
1479*	2844	XXI. 270	7577	48 Capricorni .....λ	5·4	80·15	14	21 40 20·616	+ 3·2336	— 0·010	+0·0009	+0·004
1480	2847	XXI. 276	7580	49 Capricorni .....δ	3·0	83·00	18	21 40 41·493	+ 3·3007	— 0·013	+0·0166	+0·033
1481	8912	...	7578	Lacaille 8912	5·8	82·70	6	21 40 46·700	+ 3·9147	— 0·047	...	...
1482	2849	XXI. 282	7587	11 Pegasi	5·6	81·72	5	21 41 24·100	+ 3·0438	— 0·003	+0·0009	+0·003
1483	8932	...	...	Lacaille 8932	7½	83·72	12	21 44 43·660	+ 4·2573	— 0·075	...	...
1484	...	XXI. 303	7608	Piazzi XXI. 303	6·4	81·99	9	21 45 18·526	+ 3·3299	— 0·014	...	...
1485	8943	...	...	Lacaille 8943	7·5	82·68	5	21 45 56·990	+ 3·8743	— 0·046	...	...
1486†	8951	XXI. 308	7613	Gruis ....γ	3·0	84·76	4	21 46 57·740	+ 3·6433	— 0·031	+0·005*	+0·001
1487	2860	XXI. 315	7618	51 Capricorni .....μ	5·2	84·66	7	21 47 1·483	+ 3·2564	— 0·011	+0·0181	+0·006
1488	2864	XXI. 321	7627	16 Pegasi	5·0	82·35	17	21 47 49·779	+ 2·7265	+ 0·005	—0·0005	—0·001
1489*	...	XXI. 320	7628	Piazzi XXI. 320	6·1	80·65	27	21 48 9·937	+ 3·1337	— 0·006	+0·0006	+0·003
1490	...	...	...	W.B. XXI. 1095	8·6*	84·81	2	21 48 15·710	+ 2·9681	— 0·001	...	...
1491	8963	...	...	Lacaille 8963	7¾	82·70	5	21 49 27·610	+ 3·8463	— 0·045	...	...
1492	8927	...	7625	Lacaille 8927	6·6	83·14	19	21 49 48·744	+ 6·5184	— 0·397	...	...
1493†	8962	...	7633	Indi .....δ	4·8	84·74	4	21 50 5·120	+ 4·1185	— 0·066	+0·002*	+0·001
1494	8960	...	...	Lacaille 8960	7½	83·84	4	21 50 8·940	+ 4·1881	— 0·072	...	...
1495	...	...	...	B.D. + 6° No. 4927...	8·9*	84·83	1	21 50 23·900	+ 2·9884	— 0·001	...	...
1496	...	...	...	Lalande 42760.....	8·6*	84·83	1	21 50 46·090	+ 2·9885	— 0·001	...	...
1497	...	...	...	Lalande 42794.....	7·3*	82·69	26	21 51 43·000	+ 3·0276	— 0·002	...	...
1498	8974	...	...	Lacaille 8974	7½	82·68	7	21 52 2·930	+ 3·8290	— 0·045	...	...
1499*	...	XXI. 343	7649	M. 909	6·4	80·62	20	21 52 18·887	+ 3·3542	— 0·016	+0·0007	+0·003
1500	...	...	...	B.D. + 3° No. 4646...	9·4*	82·69	4	21 53 19·130	+ 3·0277	— 0·002	...	...
1501	2873	XXI. 351	7657	12 Piscis Australis .....η	5·5	80·20	12	21 54 13·733	+ 3·4590	— 0·022	—0·0005	—0·002
1502	...	...	...	B.D. + 6° No. 4941...	9·4*	84·83	1	21 54 31·270	+ 2·9951	— 0·001	...	...
1503†	8975	...	7656	Indi .....ε	5·2	84·07	19	21 54 32·778	+ 4·1546	— 0·072	+0·480	+0·446
1504	...	...	...	B.D. + 5° No. 4926...	8·8*	84·83	2	21 55 0·470	+ 3·0022	— 0·001	...	...
1505	...	...	...	B.D. + 4° No. 4783...	9·2*	82·58	2	21 55 15·320	+ 3·0215	— 0·002	...	...

1477. *c* Capricorni in A.G.C. 1482. 27 Aquarii in B.A.C. 1499. Fundamental Star for Southern Zones.

No.	Mean Date. 1800+	No. of Obs.	Mean Dec. 1885·0.	Annual Precession. 1885·0.	Secular Variation. 1885·0.	Annual Proper Motion. μ_δ.	Corr. for μ_δ to 1885·0.	Fallows and Henderson.	Johnson.	Cape Catalogues. 1840.	1850.	1860.	1880.	A.G.C. 1875.	Melbourne, 1870 and 1880.
			° ′ ″	″	″	″	″								
1471	82·80	16	— 17 10 52·56	+16·105	+ 0·28	— 0·013	—0·03	359	538	2718	4329	1044	11441	29656	1095*
1472	82·43	3	— 23 46 55·71	+16·196	+ 0·29	— 0·106	—0·27	...	539	...	4339	...	11454	29692	...
1473	84·83	2	— 15 51 26·12	+16·246	+ 0·27	...	...	...	...	...	...	...	...	...	...
1474	80·74	3	— 17 54 43·01	+16·282	+ 0·28	...	...	...	...	...	...	...	...	...	...
1475	82·19	43	+ 9 20 53·99	+16·353	+ 0·24	+ 0·011	+0·03	*138*	...	2723	4350	1049	11474	...	1098*
1476	82·68	7	— 47 55 53·08	+16·365	+ 0·33	...	...	...	...	...	...	...	11475	29748	...
1477*	83·06	3	— 9 36 35·26	+16·370	+ 0·26	+ 0·020	+0·04	...	...	...	4352	...	...	29752	...
1478	84·71	6	+ 25 7 0·79	+16·398	+ 0·22	+ 0·010	0·00	...	...	...	...	...	...	...	...
1479	82·49	12	— 11 53 44·11	+16·445	+ 0·26	— 0·013	—0·03	...	...	...	4357	...	...	29774	*1064*
1480	82·99	18	— 16 38 53·93	+16·462	+ 0·27	— 0·297	—0·60	364	542	2728	4360	1050	11484	29788	*1065*
1481	82·70	6	— 47 49 32·55	+16·466	+ 0·32	...	...	...	...	2726	4358	...	11486	29785	...
1482*	82·44	3	+ 2 9 17·12	+16·497	+ 0·25	— 0·010	—0·03	...	...	...	...	...	...	...	...
1483	83·72	12	— 57 52 24·01	+16·661	+ 0·34	...	...	...	...	...	...	...	11509	29885	...
1484	83·04	3	— 19 9 30·17	+16·689	+ 0·26	...	...	...	...	...	4373	...	...	29903	...
1485	82·68	5	— 47 22 19·19	+16·720	+ 0·31	...	...	...	...	...	...	...	11522	29916	...
1486	84·76	4	— 37 54 18·97	+16·769	+ 0·29	— 0·02*	0·00	365*	544	2733	4375	1053	11527	29935	1104
1487	84·66	7	— 14 5 33·20	+16·771	+ 0·25	+ 0·013	0·00	...	545	...	4378	1054	11528	29938	...
1488	82·86	7	+ 25 23 4·16	+16·810	+ 0·21	— 0·002	0·00	...	...	...	...	1055	11530	...	1107*
1489	81·19	15	— 4 48 53·44	+16·827	+ 0·24	— 0·096	—0·37	...	...	...	4384	...	...	29957	*1068*
1490	84·81	2	+ 8 10 9·22	+16·831	+ 0·23	...	...	...	...	...	...	...	...	...	...
1491	82·70	5	— 47 1 23·79	+16·887	+ 0·30	...	...	...	...	...	...	...	11540	29987	..
1492	83·46	26	— 78 12 39·96	+16·904	+ 0·50	...	...	...	...	2734	4382	...	11542	29985	...
1493	84·74	4	— 55 32 18·65	+16·917	+ 0·32	— 0·01*	0·00	...	546	2737	4387	1056	11544	29999	1108
1494	83·79	6	— 57 15 5·80	+16·920	+ 0·32	...	...	...	...	...	...	...	11548	30001	...
1495	84·83	1	+ 6 41 2·21	+16·932	+ 0·23	...	...	...	...	...	...	...	...	...	...
1496	84·83	1	+ 6 41 50·77	+16·949	+ 0·23	...	...	...	...	...	...	...	...	...	...
1497	82·69	26	+ 3 36 41·78	+16·993	+ 0·23	...	...	...	...	...	...	...	...	...	*1070*
1498	82·68	7	— 46 53 29·31	+17·009	+ 0·29	...	...	...	...	...	...	...	11559	30049	...
1499*	82·31	12	— 21 43 51·84	+17·021	+ 0·25	+ 0·005	+0·01	...	...	2741	4397	...	...	30055	*1072*
1500	82·71	3	+ 3 38 33·34	+17·067	+ 0·22	...	...	...	...	...	...	...	...	...	...
1501	82·51	12	— 29 0 17·90	+17·109	+ 0·26	+ 0·017	+0·04	...	...	...	4402	1058	11575	30101	...
1502	84·83	1	+ 6 20 16·38	+17·122	+ 0·22	...	...	...	...	...	...	...	...	...	...
1503*	84·07	19	— 57 15 24·56	+17·122	+ 0·31	— 2·60	—2·42	...	...	2742	4401	...	11576	30105	1113*
1504	84·83	2	+ 5 46 38·87	+17·144	+ 0·22	...	...	...	...	...	...	...	...	...	...
1505	82·58	2	+ 4 12 18·11	+17·155	+ 0·22	...	...	...	...	...	...	...	...	...	...

1503. Proper Motion from Gill and Elkin's Parallax of Southern Stars.

No.	Bradley or Lacaille.	Piazzi.	B.A.C.	Star's Name.	Mag.	Mean Date. 1800+	No. of Obs.	Mean R.A. 1885·0.	Annual Precession. 1885·0.	Secular Variation. 1885·0.	Annual Proper Motion. μ_α.	Corr. for μ_α to 1885·0.
								h m s	s	s	s	s
1506	...	...	...	B.D. + 4° No. 4784...	9·2*	82·74	3	21 55 27·980	+ 3·0218	—0·002	...	...
1507	2879	XXI. 363	7664	20 Pegasi	5·6	84·70	8	21 55 29·180	+ 2·9183	+0·001	+0·0032	+0·001
1508	...	...	...	B.D. + 4° No. 4785...	9·5*	82·75	2	21 55 48·140	+ 3·0107	—0·002	...	...
1509*	...	XXI. 361	7665	M. 911	6·4	80·71	17	21 55 51·960	+ 3·3024	—0·014	+0·0052	+0·022
1510	...	...	...	B.D. + 4° No. 4787...	9·0*	82·65	1	21 56 5·230	+ 3·0175	—0·002	...	...
1511	...	...	...	Lalande 42949.....	8·3*	82·63	3	21 56 14·850	+ 3·0254	—0·002	...	...
1512	8999	...	...	Lacaille 8999	7½	82·68	5	21 56 19·830	+ 3·8008	—0·044	...	...
1513	...	...	...	B.D. + 3° No. 4651...	9·5*	82·82	2	21 56 34·280	+ 3·0288	—0·002	...	...
1514	...	...	...	B.D. + 3° No. 4653...	9·5*	82·76	2	21 56 59·140	+ 3·0247	—0·002	..	...
1515	...	...	...	B.D. + 4° No. 4790...	9·4*	82·77	3	21 57 21·200	+ 3·0210	—0·002	...	...
1516	...	...	...	Lalande 43002.....	7·3*	82·67	3	21 57 38·180	+ 3·0142	—0·002	...	...
1517	...	...	...	Lalande 43004.....	8·0*	82·55	4	21 57 47·390	+ 3·0268	—0·002	...	...
1518	...	...	...	B.D. + 4° No. 4793...	8·5*	82·65	2	21 57 51·730	+ 3·0199	—0·002	...	...
1519	...	...	...	B.D. + 4° No. 4795...	9·1*	82·78	3	21 58 10·110	+ 3·0162	—0·002	...	...
1520	...	...	...	B.D. + 5° No. 4940...	9·4*	82·80	3	21 58 14·500	+ 3·0012	—0·001	...	...
1521	...	...	...	B.D. + 4° No. 4796...	9·5*	82·79	3	21 58 18·590	+ 3·0157	—0·002	...	...
1522	...	...	...	B.D. + 5° No. 4941...	9·5*	82·84	1	21 58 43·120	+ 3·0107	—0·001	...	...
1523	...	...	...	B.D. + 3° No. 4658...	9·3*	82·84	2	21 59 47·920	+ 3·0243	—0·002	...	...
1524	...	...	...	A.G.C. 30218	8½	83·72	12	21 59 50·660	+ 4·1193	—0·072	...	...
1525*	2890	XXI. 387	7688	34 Aquarii .....*a*	3·2	81·47	45	21 59 52·638	+ 3·0827	—0·004	—0·0008	—0·003
1526	...	XXI. 390	...	Piazzi XXI. 390	7·5*	82·80	3	21 59 55·520	+ 3·0091	—0·001	...	...
1527	...	...	...	B.D. + 5° No. 4946...	9·5*	82·72	2	21 59 57·050	+ 3·0055	—0·001	...	...
1528	...	XXI. 391	...	Piazzi XXI. 391	8·5*	82·63	2	22 0 5·240	+ 3·0075	—0·001	...	...
1529	...	...	...	B.D. + 5° No. 4949...	9·0*	82·67	2	22 0 13·170	+ 3·0047	—0·001	...	...
1530*	2889	XXI. 389	7691	33 Aquarii .....*t*	4·3	81·76	21	22 0 13·502	+ 3·2441	—0·011	0·0000	0·000
1531	...	...	...	B.D. + 5° No. 4951...	9·5*	82·80	3	22 0 41·300	+ 3·0099	—0·001	...	...
1532	...	XXI. 395	...	Piazzi XXI. 395	7·5*	82·60	3	22 0 46·220	+ 3·0185	—0·002	...	...
1533†	9021	..	7692	Gruis .....*a*	1·9	84·13	15	22 0 58·852	+ 3·7970	—0·046	+0·0112	+0·010
1534	...	...	...	B.D. + 4° No. 4806...	9·5*	82·81	3	22 1 16·610	+ 3·0156	—0·002	...	...
1535	2899	XXI. 402	7706	24 Pegasi .....*t*	4·0	84·83	1	22 1 39·480	+ 2·7676	+0·006	+0·0209	+0·004
1536	...	...	...	B.D. + 6° No. 4965...	9·3*	82·84	1	22 2 46·490	+ 3·0029	—0·001	...	...
1537	...	...	...	B.D. + 6° No. 4966...	9·5*	...	...	22 2 (47)	+ 2·9963	—0·001	...	...
1538	...	...	...	B.D. + 5° No. 4955...	9·4*	82·75	3	22 3 14·790	+ 3·0024	—0·001	...	...
1539	...	...	...	B.D. + 6° No. 4969...	9·5*	82·77	3	22 3 22·820	+ 3·0002	—0·001	...	...
1540	...	...	...	B.D. + 4° No. 4810...	9·5*	82·79	2	22 3 41·380	+ 3·0158	—0·001	...	...

No.	Mean Date. 1800+	No. of Obs.	Mean Dec. 1885·0.	Annual Precession. 1885·0.	Secular Variation. 1885·0.	Annual Proper Motion. μ_δ.	Corr. for μ_δ to 1885·0.	Fallows and Henderson.	Johnson.	Cape Catalogues. 1840.	1850.	1860.	1880.	A.G.C. 1875.	Melbourne, 1870 and 1880.
			° ′ ″	″	″	″	″								
1506	82·74	3	+ 4 11 5·41	+17·165	+ 0·22	...	...	...	...	...	...	...	...	...	...
1507	84·70	8	+ 12 34 9·74	+17·166	+ 0·21	— 0·050	—0·02	...	...	...	...	...	...	...	...
1508	82·72	3	+ 5 6 46·38	+17·180	+ 0·22	...	...	...	...	...	...	...	...	...	...
1509	82·49	11	— 18 27 17·43	+17·183	+ 0·24	— 0·078	—0·20	...	...	...	4405	...	...	30141	*1075*
1510	82·64	3	+ 4 33 32·80	+17·193	+ 0·22	...	...	...	...	...	...	...	...	...	...
1511	82·63	3	+ 3 54 56·52	+17·200	+ 0·22	...	...	...	...	...	...	...	...	...	...
1512	82·68	5	— 46 40 50·72	+17·204	+ 0·28	...	...	...	...	...	...	...	11585	30148	...
1513	82·82	2	+ 3 38 12·61	+17·215	+ 0·22	...	...	...	...	...	...	...	...	...	...
1514	82·76	2	+ 3 59 37·00	+17·233	+ 0·22	...	...	...	...	...	...	...	...	...	...
1515	82·77	3	+ 4 18 47·78	+17·250	+ 0·22	...	...	...	...	...	...	...	...	...	...
1516	82·67	3	+ 4 53 8·07	+17·262	+ 0·22	...	...	...	...	...	...	...	...	...	...
1517	82·55	5	+ 3 50 13·91	+17·269	+ 0·22	...	...	...	...	...	...	...	...	...	*1077*
1518	82·65	2	+ 4 25 0·22	+17·273	+ 0·22	...	...	...	...	...	...	...	...	...	...
1519	82·78	3	+ 4 44 38·80	+17·286	+ 0·22	...	...	...	...	...	...	...	...	...	...
1520	82·80	3	+ 5 59 56·91	+17·289	+ 0·21	...	...	...	...	...	...	...	...	...	...
1521	82·79	3	+ 4 47 30·95	+17·293	+ 0·22	...	...	...	...	...	...	...	...	...	...
1522	82·84	2	+ 5 13 7·28	+17·311	+ 0·21	...	...	...	...	...	...	...	...	...	...
1523	82·84	2	+ 4 6 38·78	+17·358	+ 0·21	...	...	...	...	...	...	...	...	...	...
1524	83·72	12	— 57 24 37·08	+17·361	+ 0·29	...	...	...	...	...	...	...	...	30218	...
1525	82·00	14	— 0 52 40·63	+17·361	+ 0·22	+ 0·002	+0·01	367*	550	2749	4420	1060	11608	30221	1117*
1526	82·80	4	+ 5 24 27·06	+17·363	+ 0·21	...	...	...	...	...	...	...	...	...	...
1527	82·72	2	+ 5 42 41·21	+17·365	+ 0·21	...	...	...	...	...	...	...	...	...	...
1528	82·63	2	+ 5 33 3·23	+17·370	+ 0·21	...	...	...	...	...	...	...	...	...	...
1529	82·66	3	+ 5 47 41·46	+17·376	+ 0·21	...	...	...	...	...	...	...	...	...	...
1530	82·76	17	— 14 25 37·81	+17·377	+ 0·23	— 0·049	—0·11	368	551	2750	4422	1061	11609	30229	*1079*
1531	82·80	3	+ 5 22 20·10	+17·397	+ 0·21	...	...	...	...	...	...	...	...	...	...
1532	82·60	3	+ 4 38 5·15	+17·400	+ 0·21	...	...	...	...	...	...	...	...	...	...
1533*	84·12	17	— 47 31 1·83	+17·409	+ 0·27	— 0·172	—0·15	369*	552	2752	4423	1062	11617	30241	1119*
1534	82·81	3	+ 4 54 0·36	+17·423	+ 0·21	...	...	...	...	...	...	...	...	...	...
1535	84·83	1	+ 24 47 1·34	+17·439	+ 0·19	+ 0·020	0·00	...	...	...	...	...	11625	...	...
1536	82·66	5	+ 6 9 46·27	+17·487	+ 0·21	...	...	...	...	...	...	...	...	...	...
1537	82·75	2	+ 6 38 6·53	+17·488	+ 0·21	...	...	...	...	...	...	...	...	...	...
1538	82·75	3	+ 6 7 32·87	+17·507	+ 0·21	...	...	...	...	...	...	...	...	...	...
1539	82·77	3	+ 6 19 21·54	+17·513	+ 0·21	...	...	...	...	...	...	...	...	...	...
1540	82·79	2	+ 4 58 34·31	+17·526	+ 0·21	...	...	...	...	...	...	...	...	...	...

1533. Proper Motion from Newcomb's Catalogue of 1098 Standard Stars.

No.	Bradley or Lacaille.	Piazzi.	B.A.C.	Star's Name.	Mag.	Mean Date. 1800+	No. of Obs.	Mean R.A. 1885·0.	Annual Precession. 1885·0.	Secular Variation. 1885·0.	Annual Proper Motion. μ_a.	Corr. for μ_a to 1885·0.
								h m s	s	s	s	s
1541	2915	XXII. 3	7721	27 Pegasi	5·7	84·80	4	22 4 7·950	+ 2·6581	+0·009	—0·0050	—0·001
1542	...	...	...	B.D. + 6° No. 4972...	9·3*	82·78	2	22 4 11·930	+ 2·9995	—0·001	...	...
1543*	2914	XXII. 1	7723	26 Pegasi .....θ	3·8	80·38	37	22 4 23·847	+ 3·0087	—0·001	+0·0177	+0·082
1544	2909	XXI. 420	7722	38 Aquarii .....e	5·4	81·78	7	22 4 28·490	+ 3·2112	—0·010	+0·0008	+0·003
1545	2917	XXII. 6	7731	29 Pegasi .....π	4·4	84·00	5	22 4 52·850	+ 2·6605	+0·009	—0·0020	—0·002
1546	9044	...	7728	Lacaille 9044	7½	83·80	11	22 5 15·080	+ 4·0424	—0·069	...	...
1547	...	...	...	B.D. + 6° No. 4979...	9·2*	82·71	2	22 5 30·160	+ 2·9975	—0·001	...	...
1548	...	...	...	B.D. + 5° No. 4964...	9·3*	82·73	3	22 5 33·880	+ 3·0059	—0·001	...	...
1549	...	...	...	B.D. + 6° No. 4982...	8·3*	82·70	3	22 6 40·860	+ 2·9950	0·000	...	...
1550	2920	XXII. 17	7744	Bradley 2920	6·3	83·71	3	22 6 44·460	+ 3·1311	—0·006	—0·0047	—0·006
1551	...	...	...	B.D. + 6° No. 4983...	9·2*	82·70	4	22 6 53·760	+ 2·9965	0·000	...	...
1552	...	...	...	B.D. + 6° No. 4985...	9·0*	82·63	2	22 6 56·680	+ 2·9997	—0·001	...	...
1553	...	...	...	W. B. XXII. 102.....	9·1*	82·58	4	22 7 24·750	+ 2·9927	0·000	...	...
1554	...	...	...	B.D. — 5° No. 5735...	9·0*	83·77	3	22 7 37·230	+ 3·1289	—0·006	...	...
1555	...	...	...	W. B. XXII. 110.....	9·0*	82·63	2	22 7 50·450	+ 2·9913	0·000	...	...
1556	2924	...	7752	Bradley 2924	7·3*	83·74	3	22 7 52·190	+ 3·1276	—0·006	+0·0065	+0·008
1557	...	...	...	B.D. — 5° No. 5739...	8·6*	83·75	4	22 7 54·520	+ 3·1297	—0·006	...	...
1558	2923	XXII. 22	7751	41 Aquarii.....	5·5	81·81	7	22 7 56·840	+ 3·3216	—0·016	—0·0015	—0·005
1559	...	...	...	Lalande 43361.....	7·9*	82·57	6	22 8 0·130	+ 2·9937	0·000	...	...
1560	...	...	...	Lalande 43392.....	7·5*	82·68	3	22 8 45·210	+ 2·9913	0·000	...	...
1561	...	...	...	B.D. + 7° No. 4830...	9·5*	82·71	3	22 8 55·680	+ 2·9933	0·000	...	...
1562	8924	...	7713	Octantis v	6·4	82·74	48	22 9 18·846	+13·3725	—3·390	—0·035*	—0·079
1563	...	...	...	W. B. XXII. 154.....	9·0*	82·71	3	22 9 40·620	+ 2·9923	0·000	...	...
1564†	9074	...	7767	Toucani .....a	2·8	84·74	7	22 10 36·761	+ 4·1727	—0·086	—0·007*	—0·002
1565*	2929	XXII. 44	7773	43 Aquarii .....θ	4·3	80·97	30	22 10 45·852	+ 3·1625	—0·007	+0·0057	+0·023
1566	...	...	...	B.D. + 7° No. 4835...	9·5*	82·72	3	22 10 55·320	+ 2·9903	0·000	...	...
1567	...	...	...	Lalande 43484.....	8·2*	82·65	3	22 11 22·640	+ 2·9888	0·000	...	...
1568	...	...	...	Lalande 43503..... ...	8·9*	82·63	3	22 11 39·440	+ 2·9912	0·000	...	...
1569	...	...	...	W. B. XXII. 206.....	8·7*	82·72	3	22 12 6·820	+ 2·9903	0·000	...	...
1570	...	...	...	W. B. XXII. 212.....	9·2*	82·58	2	22 12 32·800	+ 2·9899	0·000	...	...
1571	...	...	...	B.D. + 7° No. 4841...	9·4*	82·74	3	22 12 50·450	+ 2·9890	0·000	...	...
1572	...	...	..	B.D. + 7° No. 4843...	9·0*	82·70	4	22 13 4·730	+ 2·9879	0·000	...	...
1573	...	...	...	B.D. + 7° No. 4849...	9·3*	82·72	3	22 14 4·850	+ 2·9884	0·000	...	...
1574	...	...	...	Lalande 43572.....	8·7*	84·85	2	22 14 15·570	+ 3·0495	—0·002	...	...
1575	...	...	...	Lalande 43567.....	8·5*	80·73	3	22 14 18·830	+ 3·2333	—0·011	...	...

1541. π^1 Pegasi in B.A.C.
1545. π^2 Pegasi in B.A.C.

1544. e^2 Aquarii in B.A.C.
1562. Usually named C Octantis at the Cape.

No.	Mean Date. 1800+	No. of Obs.	Mean Dec. 1885·0.	Annual Precession. 1885·0.	Secular Variation. 1885·0.	Annual Proper Motion. μ_δ.	Corr. for μ_δ to 1885·0.	Fallows and Henderson.	Johnson.	Cape Catalogues. 1840.	1850.	1860.	1880.	A.G.C. 1875.	Melbourne, 1870 and 1880.
			° ′ ″	″	″	″	″								
1541*	84·80	4	+ 32 36 38·43	+17·544	+ 0·18	— 0·061	—0·01	...	...	...	...	...	...	...	...
1542	82·74	3	+ 6 25 25·67	+17·548	+ 0·20	...	...	...	...	...	...	...	...	...	...
1543	80·86	14	+ 5 37 57·06	+17·556	+ 0·21	+ 0·036	+0·15	...	...	...	...	...	11637	...	*1083*
1544*	83·04	3	— 12 7 47·75	+17·559	+ 0·22	+ 0·010	+0·02	...	...	..	4440	...	...	30315	...
1545*	84·00	5	+ 32 36 51·37	+17·576	+ 0·18	— 0·005	—0·01	...	...	...	...	...	...	...	...
1546	83·80	11	— 56 30 40·93	+17·592	+ 0·28	...	...	...	...	...	4444	...	11644	30332	...
1547	82·68	4	+ 6 40 14·36	+17·602	+ 0·20	...	...	...	...	...	...	...	...	...	...
1548	82·72	4	+ 5 55 45·93	+17·605	+ 0·20	...	...	...	...	...	...	...	...	...	...
1549	82·70	3	+ 6 57 4·61	+17·652	+ 0·20	...	...	...	...	...	...	...	...	...	...
1550	83·71	3	— 5 17 14·61	+17·654	+ 0·21	— 0·022	—0·03	...	...	...	4451	...	...	30366	...
1551	82·70	4	+ 6 50 8·26	+17·661	+ 0·20	...	...	...	...	...	...	...	...	...	...
1552	82·63	3	+ 6 33 14·16	+17·663	+ 0·20	...	...	...	...	...	...	...	...	...	...
1553	82·58	4	+ 7 12 4·75	+17·682	+ 0·20	...	...	...	...	...	...	...	...	...	*1084*
1554	83·77	3	— 5 7 44·42	+17·690	+ 0·21	...	...	...	...	...	...	...	...	...	...
1555	82·63	3	+ 7 21 15·70	+17·699	+ 0·20	...	...	...	...	...	...	...	...	...	...
1556	83·74	3	— 5 1 12·81	+17·701	+ 0·21	— 0·09	—0·11	...	...	...	4457	...	...	...	...
1557	83·75	4	— 5 12 49·36	+17·702	+ 0·21	...	...	...	...	...	...	...	...	...	...
1558	83·10	3	— 21 38 44·67	+17·704	+ 0·22	+ 0·068	+0·13	...	...	...	4456	...	...	30385	...
1559	82·57	6	+ 7 8 45·13	+17·706	+ 0·20	...	...	...	...	...	...	...	...	...	...
1560	82·68	3	+ 7 24 22·94	+17·737	+ 0·20	...	...	...	...	...	...	...	...	...	...
1561	82·71	3	+ 7 14 27·01	+17·744	+ 0·20	...	...	...	...	...	...	...	...	...	...
1562*	83·47	27	— 86 33 2·50	+17·760	+ 0·90	+ 0·08*	+0·12	7	549	2753	...	1064	11665	30380	1123*
1563	82·71	3	+ 7 22 30·84	+17·774	+ 0·20	...	...	...	...	...	...	...	...	...	...
1564	84·74	7	— 60 49 56·12	+17·812	+ 0·27	— 0·04*	—0·01	374*	555	2762	4462	1071	11679	30422	1128
1565	82·44	18	— 8 21 19·64	+17·818	+ 0·21	— 0·019	—0·05	376	556	2764	4467	1073	11682	30430	1129*
1566	82·72	3	+ 7 37 54·22	+17·825	+ 0·19	...	...	...	...	...	...	...	...	...	...
1567	82·65	3	+ 7 48 4·68	+17·843	+ 0·19	...	...	...	...	...	...	...	...	...	...
1568	82·63	3	+ 7 35 57·01	+17·855	+ 0·19	...	...	...	...	...	...	...	...	...	...
1569	82·72	3	+ 7 42 43·60	+17·872	+ 0·19	...	...	...	...	...	...	...	...	...	...
1570	82·59	5	+ 7 46 41·32	+17·890	+ 0·19	...	...	...	...	...	...	...	...	...	*1088*
1571	82·70	4	+ 7 52 26·82	+17·901	+ 0·19	...	...	...	...	...	...	...	...	...	...
1572	82·70	4	+ 8 0 6·48	+17·911	+ 0·19	...	...	...	...	...	...	...	...	...	...
1573	82·72	3	+ 8 1 22·26	+17·950	+ 0·19	...	...	...	...	...	...	...	...	...	...
1574	84·85	2	+ 2 12 21·57	+17·956	+ 0·19	...	...	...	...	...	...	...	...	...	...
1575	80·73	3	— 15 7 53·41	+17·959	+ 0·20	...	...	...	...	...	...	...	...	...	*1089*

No.	Bradley or Lacaille.	Piazzi.	B.A.C.	Star's Name.	Mag.	Mean Date. 1800+	No. of Obs.	Mean R.A. 1885·0.	Annual Precession 1885·0.	Secular Variation. 1885·0.	Annual Proper Motion. μ_a.	Corr. for μ_a to 1885·0.
								h m s	s	s	s	s
1576	...	...	...	B.D. + 8° No. 4846...	9·2*	82·65	4	22 14 42·950	+2·9868	0·000	...	...
1577*	2940	XXII. 67	7790	47 Aquarii.....	5·4	80·62	12	22 15 15·662	+3·3128	−0·016	−0·0034	−0·015
1578	...	...	...	Lalande 43596.....	8·0*	80·77	3	22 15 22·720	+3·2307	−0·011	...	...
1579	...	...	...	W B. XXII. 274	8·7*	82·76	3	22 15 26·650	+2·9885	0·000	...	...
1580	...	XXII. 73	...	Piazzi XXII. 73.....	8·2*	82·67	2	22 15 36·370	+2·9893	0·000	...	...
1581*	2943	XXII. 72	7795	48 Aquarii .....γ	4·1	81·29	56	22 15 42·929	+3·0926	−0·004	+0·0068	+0·025
1582	2944	XXII. 74	7796	31 Pegasi	5·1	84·74	7	22 15 51·464	+2·9517	+0·002	−0·0013	0·000
1583	...	...	...	B.D. + 8° No.4853 ...	8·9*	82·66	2	22 16 42·420	+2·9865	+0·001	...	...
1584	...	...	...	W.B. XXII. 326	9·2*	82·69	5	22 17 42·220	+2·9858	+0·001	...	...
1585	...	...	...	W.B. XXII. 328	9·2*	82·84	3	22 17 44·210	+2·9853	+0·001	...	...
1586	...	...	...	Lalande 43697.....	8·7*	82·56	5	22 17 48·060	+2·9840	+0·001	...	...
1587*	2949	XXII. 86	7806	50 Aquarii.....	6·0	80·09	14	22 18 17·401	+3·2167	−0·011	+0·0015	+0·007
1588	...	...	...	W.B. XXII. 366	9·0*	84·85	1	22 18 57·690	+3·0518	−0·002	...	...
1589	...	...	...	B D. + 8° No. 4864...	9·5*	82·69	4	22 19 8·010	+2·9891	+0·001	...	...
1590	2952	XXII. 90	7814	52 Aquarii .....π	4·6	83·27	12	22 19 24·250	+3·0645	−0·003	−0·0012	−0·002
1591	...	...	...	W.B. XXII. 386	9·2*	82·62	5	22 19 42·180	+2·9877	+0·001	...	...
1592	...	...	...	W.B. XXII. 437	8·6*	84·85	1	22 21 57·470	+3·0620	−0·003	...	...
1593†	9138	XXII. 104	7828	Gruis .....δ^1	4·2	84·71	6	22 22 23·565	+3·6074	−0·039	−0·004*	−0·001
1594	...	...	...	Lalande 43867.....	7·5*	82·61	7	22 22 25·450	+2·9584	+0·002	...	...
1595	...	...	...	B.D. + 8° No. 4873...	9·1*	82·71	2	22 22 26·540	+2·9891	+0·001	...	...
1596	9140	XXII. 108	7830	Grnis .....δ^2	4·4	84·84	2	22 22 52·940	+3·6095	−0·039	...	...
1597	2960	XXII. 111	7832	55 Aquarii (1st star)...ζ	4½	84·63	4	22 22 54·570	+3·0782	−0·003	+0·0110	+0·004
1598*	2966	XXII. 122	7840	57 Aquarii .....σ	4·8	81·36	26	22 24 33·598	+3·1801	−0·009	−0·0011	−0·004
1599	...	...	...	Lalande 43957.....	7·8*	82·61	6	22 24 43·200	+2·9763	+0·002	...	...
1600†	9153	...	7841	Toucani .....ν	5·5	84·81	5	22 25 12·782	+4·1077	−0·092	...	...
1601	...	XXII. 131	...	Piazzi XXII. 131 ...	7·7*	82·67	6	22 25 25·310	+2·9901	+0·001	...	...
1602	...	...	...	W.B. XXII. 501	9·2*	82·67	4	22 25 34·090	+2·9922	+0·001	...	...
1603	...	XXII. 133	...	Piazzi XXII. 133.....	8	82·72	6	22 26 1·375	+3·2071	−0·010	...	...
1604	...	...	...	Lalande 44007.....	7·8*	82·67	6	22 26 2·290	+2·9768	+0·002	...	...
1605	2975	XXII. 141	7855	7 Lacertæ	3·9	79·67	3	22 26 33·277	+2·4475	+0·017	+0·0133	+0·071
1606	...	...	...	W.B. XXII. 555	9·0*	82·63	3	22 28 6·860	+2·9929	+0·001	...	...
1607	...	...	...	Lalande 44084.....	8·0*	82·72	6	22 28 12·680	+2·9935	+0·001	...	...
1608*	2976	XXII. 143	7864	59 Aquarii .....υ	5·2	80·69	20	22 28 24·071	+3·2752	−0·015	+0·0140	+0·006
1609	...	XXII. 145	7865	Piazzi XXII. 145 ...	7	84·87	1	22 28 43·010	+3·0723	−0·003	...	...
1610*	2979	XXII. 151	7868	62 Aquarii .....η	4·2	81·36	28	22 29 26·793	+3·0788	−0·003	+0·0042	+0·015

1577. Fundamental Star for Southern Zones.

1605. α Lacertæ in B.A.C.

1608. Fundamental Star for Southern Zones.

No.	Mean Date. 1800+	No. of Obs.	Mean Dec. 1885·0.	Annual Precession. 1885·0.	Secular Variation. 1885·0.	Annual Proper Motion. μ_δ.	Corr.ⁿ for μ_δ to 1885·0.	Fallows and Henderson.	Johnson.	Cape Catalogues. 1840.	1850.	1860.	1880.	A.G.C. 1875.	Melbourne, 1870 and 1880.
			° ′ ″	″	″	″	″								
1576	82·65	4	+ 8 12 45·75	+17·974	+ 0·19	...	...	...	..	...	...	...	...	...	...
1577*	82·25	12	— 22 10 26·50	+17·995	+ 0·21	— 0·069	—0·19	...	557	...	4476	...	11707	30513	*1090*
1578	80·77	3	— 15 2 7·01	+18·000	+ 0·20	...	...	...	...	...	...	...	...	...	*1091*
1579	82·76	3	+ 8 6 23·49	+18·003	+ 0·18	...	...	...	...	...	...	...	...	...	...
1580	82·66	3	+ 8 2 37·38	+18·009	+ 0·18	...	...	...	...	...	...	...	...	...	...
1581	81·76	29	— 1 57 59·02	+18·013	+ 0·19	+ 0·017	+0·06	378	558	...	4481	...	11711	30529	*1092*
1582	84·74	6	+ 11 37 33·55	+18·019	+ 0·18	+ 0·010	0·00	...	...	...	...	...	...	...	...
1583	82·64	3	+ 8 23 21·89	+18·051	+ 0·18	...	...	...	...	...	...	...	...	...	...
1584	82·68	6	+ 8 32 16·12	+18·089	+ 0·18	...	...	...	...	...	...	...	...	...	...
1585	82·84	3	+ 8 34 55·28	+18·090	+ 0·18	...	...	...	...	...	...	...	...	...	...
1586	82·56	6	+ 8 42 45·66	+18·093	+ 0·18	...	...	...	...	...	...	...	...	...	*1094*
1587	82·75	12	— 14 6 42·93	+18·110	+ 0·19	+ 0·014	+0·03	...	...	...	4487	1078	11727	30582	*1095*
1588	84·85	1	+ 2 4 15·63	+18·136	+ 0·18	...	...	...	...	...	...	...	...	...	...
1589	82·69	5	+ 8 19 20·32	+18·143	+ 0·18	...	...	...	...	...	...	...	...	...	...
1590	84·20	9	+ 0 47 39·12	+18·152	+ 0·18	— 0·004	0·00	...	...	...	...	...	11732	...	...
1591	82·62	5	+ 8 30 19·13	+18·164	+ 0·18	...	...	...	...	...	...	...	...	...	...
1592	84·85	1	+ 1 4 15·64	+18·246	+ 0·18	...	...	...	...	...	...	...	...	...	...
1593	84·71	6	— 44 4 57·75	+18·262	+ 0·21	— 0·02*	—0·01	...	560	2780	4498	1081	11745	30647	1138
1594	82·61	7	+ 11 39 44·31	+18·263	+ 0·17	...	...	...	...	...	...	...	...	...	...
1595	82·67	5	+ 8 35 2·47	+18·264	+ 0·17	...	...	...	...	...	...	...	...	...	...
1596	84·84	2	— 44 20 12·98	+18·280	+ 0·21	...	...	...	561	2782	...	1083	11749	30657	1139
1597	84·63	4	— 0 36 29·45	+18·281	+ 0·18	+ 0·042	+0·02	381	562	...	4500	1084	11750	30662	...
1598	82·11	18	— 11 15 57·82	+18·339	+ 0·18	— 0·037	—0·11	...	563	2786	4505	1085	11769	30696	*1098*
1599	82·61	6	+ 10 5 19·65	+18·345	+ 0·17	...	...	...	...	...	...	...	...	...	*1099*
1600	84·81	5	— 62 34 19·99	+18·363	+ 0·23	...	...	...	...	2785	4506	...	11774	30709	1142
1601	82·67	7	+ 8 43 51·76	+18·370	+ 0·17	...	...	...	...	...	...	...	...	...	*1101*
1602	82·67	4	+ 8 31 16·49	+18·375	+ 0·17	...	...	...	...	...	...	...	...	...	...
1603	82·72	6	— 14 11 10·66	+18·391	+ 0·18	...	...	...	...	...	...	...	...	30728	...
1604	82·67	6	+ 10 10 23·43	+18·392	+ 0·17	...	...	...	...	...	...	...	...	...	*1102*
1605*	82·50	12	+ 49 41 33·21	+18·409	+ 0·13	+ 0·005	+0·01	...	...	2789	...	...	...	...	...
1606	82·63	3	+ 8 39 39·70	+18·463	+ 0·16	...	...	...	...	...	...	...	...	...	...
1607	82·69	7	+ 8 36 28·82	+18·467	+ 0·16	...	...	...	...	...	...	...	...	...	...
1608*	82·10	12	— 21 17 48·26	+18·473	+ 0·18	— 0·152	—0·44	...	565	2790	4516	...	11793	30782	*1103*
1609	84·87	1	+ 0 0 13·61	+18·484	+ 0·17	...	...	...	...	...	4517	...	...	30789	...
1610	81·89	19	— 0 42 35·43	+18·508	+ 0·17	— 0·053	—0·16	382	566	...	4520	1092	11800	30800	1146*

No.	Bradley or Lacaille.	Piazzi.	B.A.C.	Star's Name.	Mag.	Mean Date. 1800+	No. of Obs.	Mean R.A. 1885·0.	Annual Precession. 1885·0.	Secular Variation. 1885·0.	Annual Proper Motion. μ_a.	Corr. for μ_a to 1885·0.
								h m s	s	s	s	s
1611	...	...	...	B.D. + 8° No. 4896...	9·5*	82·68	2	22 29 42·260	+2·9974	+0·001	...	...
1612	...	...	...	W.B. XXII. 601	8·7*	82·67	4	22 30 24·570	+3·0037	+0·001	...	...
1613	...	...	...	B.D. + 7° No. 4896..	9·3*	82·73	3	22 30 25·290	+3·0053	+0·001	...	...
1614	...	...	...	B.D. + 7° No. 4897...	9·5*	82·69	2	22 30 30·160	+3·0001	+0·001	...	...
1615	...	...	...	B.D. + 8° No. 4900..	9·5*	82·69	3	22 30 45·470	+2·9988	+0·001	...	...
1616	9123	...	...	Lacaille 9123.....	8¼	82·62	27	22 31 9·457	+8·1740	−1·211	...	...
1617	...	...	...	B.D. + 7° No. 4899..	9·3*	82·66	3	22 31 16·670	+3·0026	+0·001	...	...
1618	...	...	...	W.B. XXII. 631	9·1*	82·65	3	22 31 37·200	+2·9998	+0·001	...	...
1619	2983	XXII. 166	7884	63 Aquarii .....κ	5·5	81·80	6	22 31 48·030	+3·1147	−0·005	−0·0060	−0·019
1620	...	...	...	B.D. + 7° No. 4900...	9·3*	82·80	3	22 32 8·480	+3·0074	+0·001	...	...
1621	...	...	...	Lalande 44272.....	8·3*	82·62	4	22 33 6·270	+3·0048	+0·001	...	...
1622	2990	XXII. 181	7901	10 Lacertæ	5·0	84·00	3	22 34 6·150	+2·6837	+0·014	+0·0011	+0·001
1623†	9165	...	7886	Octantis.....β	4·4	84·48	18	22 34 13·710	+6·5427	−0·647	−0·034*	−0·018
1624	...	XXII. 183	...	Piazzi XXII. 183	6·4	81·83	6	22 34 50·910	+3·1076	−0·005	...	...
1625	...	...	...	W.B. XXII. 719	9·2*	82·66	19	22 35 41·150	+3·0082	+0·001	...	...
1626	2992	XXII. 189	7908	42 Pegasi ....ζ	3·6	81·05	40	22 35 43·561	+2·9857	+0·002	+0·0044	+0·017
1627†	9211	...	7904	Gruis .....β	2·2	84·73	8	22 35 47·720	+3·5963	−0·044	+0·012*	+0·003
1628*	3000	XXII. 203	7922	66 Aquarii .....g	4·8	80·03	13	22 37 23·880	+3·2387	−0·014	−0·0029	−0·014
1629	3003	XXII. 205	7923	44 Pegasi.....η	3·1	84·00	4	22 37 36·760	+2·8050	+0·011	+0·0001	0·000
1630	3004*	XXII. 207	7930	20 Piscis Australis.....	6·5	81·82	6	22 39 13·770	+3·2959	−0·018	+0·0013	+0·004
1631	9202	...	7924	Octantis.....ξ	5·7	...	...	22 39 (35)	+5·8879	−0·490	...	...
1632	3010	XXII. 217	7945	47 Pegasi.....λ	4·2	84·00	7	22 40 59·491	+2·8810	+0·008	+0·0031	+0·003
1633†	9249	...	7946	Gruis .....ε	3·5	84·72	8	22 41 36·160	+3·6448	+0·052	+0·003*	+0·001
1634*	3013	XXII. 225	7954	71 Aquarii .....τ	4·1	80·51	21	22 43 30·143	+3·1832	−0·010	−0·0030	−0·013
1635	3016	XXII. 231	7958	48 Pegasi.....μ	3·7	84·79	6	22 44 27·187	+2·8798	+0·009	+0·0096	+0·002
1636*	3019	XXII. 235	7970	73 Aquarii .....λ	3·8	81·15	64	22 46 36·853	+3·1330	−0·006	−0·0016	−0·006
1637	3025	XXII. 245	7980	76 Aquarii .....δ	3·4	82·95	19	22 48 32·752	+3·1933	−0·011	−0·0051	−0·010
1638	3031	XXII. 252	7988	50 Pegasi.....ρ	5·0	81·81	8	22 49 26·310	+3·0140	+0·002	+0·0033	+0·011
1639	...	...	...	A.G.C. 31187	8½	82·88	12	22 49 44·962	+3·3796	−0·028	...	...
1640	3032*	XXII. 253	7992	24 Piscis Australis .....α	1·4	80·88	16	22 51 17·506	+3·3025	−0·021	+0·0232	+0·096
1641*	3033	XXII. 254	7993	Bradley 3033	6·5	80·15	12	22 51 19·950	+3·1099	−0·005	−0·0044	−0·021
1642	3036	XXII. 266	8005	2 Piscium	5·6	81·79	8	22 53 33·790	+3·0701	−0·001	+0·0039	+0·013
1643†	9322	...	8008	Gruis .....ζ	4·0	84·69	8	22 54 5·025	+3·5825	−0·053	−0·011*	−0·003
1644	3043	XXII. 284	8023	1 Andromedæ .....o	3·8	79·93	7	22 56 37·816	+2·7471	+0·019	+0·0007	+0·004
1645	3047	XXII. 288	8032	53 Pegasi .....β	Var.	84·00	4	22 58 12·020	+2·8873	+0·012	+0·0130	+0·013

1628. g^1 Aquarii in B A.C.

1631. B.A.C. gives no letter.

1634. τ^2 Aquarii in B.A.C.

No.	Mean Date. 1800+	No. of Obs.	Mean Dec. 1885·0.	Annual Precession. 1885·0.	Secular Variation. 1885·0.	Annual Proper Motion. μ_δ.	Corr. for μ_δ to 1885·0.	Fallows and Henderson.	Johnson.	Cape Catalogues. 1840.	1850.	1860.	1880.	A.G.C. 1875.	Melbourne, 1870 and 1880.
			° ′ ″	″	″	″	″								
1611	82·68	3	+ 8 19 5·28	+18·517	+ 0·16	...	...	..	...	...	...	...	...	...	...
1612	82·67	5	+ 7 40 39·58	+18·541	+ 0·16	...	...	...	...	...	...	...	...	...	...
1613	82·70	4	+ 7 30 12·47	+18·541	+ 0·16	...	...	...	...	...	...	...	...	...	...
1614	82·69	3	+ 8 5 1·79	+18·544	+ 0·16	...	...	...	...	...	...	...	...	...	...
1615	82·69	3	+ 8 14 51·93	+18·552	+ 0·16	...	...	...	...	...	...	...	...	...	...
1616	82·77	15	− 84 20 30·81	+18·565	+ 0·44	...	...	...	...	...	...	...	11807	30816	*1106*
1617	82·66	3	+ 7 52 34·32	+18·569	+ 0·16	...	...	...	...	...	...	...	...	...	...
1618	82·65	4	+ 8 13 1·72	+18·581	+ 0·16	...	...	...	...	...	...	...	...	...	*1107*
1619	83·06	3	− 4 49 14·77	+18·587	+ 0·16	− 0·108	−0·21	...	...	...	4528	1093	...	30842	...
1620	82·73	5	+ 7 23 57·31	+18·598	+ 0·16	...	...	...	...	...	...	...	...	...	...
1621	82·60	5	+ 7 46 32·01	+18·629	+ 0·16	...	...	...	...	...	...	...	...	...	...
1622	84·00	3	+ 38 27 6·92	+18·661	+ 0·14	0·000	0·00	...	...	...	...	...	...	...	...
1623	84·50	20	− 81 59 1·25	+18·666	+ 0·34	0·00*	0·00	*12*	567	2794	4530	1096	11830	30879	1148*
1624	83·08	3	− 4 9 8·37	+18·685	+ 0·16	...	...	...	...	...	..	...	...	30896	...
1625	82·65	23	+ 7 35 58·19	+18·712	+ 0·15	...	...	...	...	...	...	...	...	...	*1111*
1626	81·70	20	+ 10 13 53·09	+18·713	+ 0·15	− 0·018	−0·06	*139*	...	2800	4544	1100	11836	...	1150*
1627	84·73	8	− 47 29 7·93	+18·715	+ 0·18	− 0·05*	−0·01	384*	569	2799	4542	1099	11837	30913	1149
1628*	81·77	12	− 19 25 54·29	+18·765	+ 0·16	− 0·046	−0·15	...	...	...	4553	...	...	30947	*1114*
1629	84·00	4	+ 29 37 11·77	+18·772	+ 0·14	− 0·033	−0·03	...	...	...	...	...	...	...	...
1630	83·06	3	− 25 50 28·52	+18·820	+ 0·16	+ 0·043	+0·08	...	...	...	4560	...	11857	30985	...
1631*	84·84	1	− 80 43 48·37	+18·832	+ 0·29	...	...	...	...	...	4554	...	11859	30980	...
1632	84·00	7	+ 22 57 38·63	+18·874	+ 0·13	− 0·004	0·00	...	...	...	...	...	...	...	...
1633	84·72	8	− 51 55 16·31	+18·892	+ 0·17	− 0·10*	−0·03	386	571	2806	4570	1105	11884	31044	1162
1634*	81·35	12	− 14 11 57·02	+18·947	+ 0·14	− 0·040	−0·15	...	...	2808	4575	1107	11897	31082	*1116*
1635	84·79	6	+ 23 59 39·98	+18·974	+ 0·13	− 0·042	−0·01	...	...	...	...	...	11903	...	...
1636	82·06	49	− 8 11 28·68	+19·034	+ 0·13	+ 0·040	+0·12	388	573	2815	4586	1110	11922	31130	*1119*
1637	82·96	20	− 16 25 55·92	+19·087	+ 0·14	− 0·010	−0·02	389*	574	2816	4590	1111	11935	31163	*1122*
1638	83·10	3	+ 8 12 10·58	+19·110	+ 0·13	+ 0·037	+0·07	...	...	...	...	...	...	...	...
1639	82·88	12	− 37 17 28·65	+19·119	+ 0·14	...	...	...	...	...	...	...	...	31187	...
1640	83·65	49	− 30 13 52·66	+19·159	+ 0·13	− 0·159	−0·21	391*	575	2817	4597	1113	11951	31213	1166*
1641	82·81	12	− 5 25 27·89	+19·160	+ 0·12	+ 0·005	+0·01	...	...	...	4598	...	...	31215	*1124*
1642	83·07	3	+ 0 20 56·36	+19·217	+ 0·12	− 0·074	−0·14	...	...	...	...	...	...	...	...
1643	84·69	8	− 53 22 13·34	+19·230	+ 0·14	0·00*	0·00	...	576	...	4605	1115	11969	31263	1168
1644	82·39	11	+ 41 42 30·54	+19·292	+ 0·10	0·000	0·00	...	...	2819	...	...	...	...	...
1645*	84·00	4	+ 27 27 32·76	+19·329	+ 0·10	+ 0·133	+0·13	...	...	...	...	...	...	...	...

1645. Limits of magnitude, 2·2–2·7 : Period irregular.

No.	Bradley or Lacaille.	Piazzi.	B.A.C.	Star's Name.	Mag.	Mean Date. 1800+	No of Obs.	Mean R.A. 1885·0.	Annual Precession. 1885·0.	Secular Variation. 1885·0.	Annual Proper Motion. μ_a.	Corr. for μ_a to 1885·0.
								h m s	s	s	s	s
1646	9352	...	...	Lacaille 9352	7½	82·70	11	22 58 24·830	+ 3·3351	— 0·027	...	...
1647	9332	...	8030	Lacaille 9332	6·3	83·00	17	22 58 58·705	+ 5·0885	— 0·384	...	...
1648	3050	XXII. 290	8034	54 Pegasi.....a	2·6	81·47	30	22 59 1·896	+ 2·9809	+ 0·006	+0·0028	+0·010
1649*	3048	XXII. 289	8035	83 Aquarii .....h	5·5	80·76	22	22 59 9·877	+ 3·1237	— 0·006	+0·0071	+0·030
1650†	9366	XXII. 296	8043	Gruis .....θ	4·2	84·86	5	23 0 23·804	+ 3·4060	— 0·036	—0·005*	—0·001
1651	...	...	...	Lalande 45234.....	7¼	80·82	3	23 1 51·890	+ 3·0778	— 0·002	...	...
1652*	3062	XXII. 313	8062	88 Aquarii .....c^2	3·6	81·50	28	23 3 18·800	+ 3·2033	— 0·014	+0·0014	+0·005
1653†	9382	...	8067	Gruis .....ι	3·9	84·69	7	23 3 50·720	+ 3·4068	— 0·038	+0·007*	+0·002
1654	...	...	...	A.G.C. 31452	7¾	82·79	12	23 3 57·898	+ 3·3077	— 0·026	...	...
1655	3072	XXIII. 9	8078	59 Pegasi	5·1	81·79	7	23 5 55·840	+ 3·0279	+ 0·003	—0·0020	—0·006
1656	3076	XXIII. 19	8085	90 Aquarii .....ϕ	4·2	83·39	15	23 8 21·941	+ 3·1073	— 0·004	+0·0009	+0·001
1657	9225	...	8072	Octantis .....τ	6·0	83·11	37	23 10 18·649	+11·7979	— 5·922	+0·036*	+0·068
1658†	9420	...	8098	Toucani .....γ	4·0	84·85	5	23 10 42·598	+ 3·5447	— 0·064	0·000*	0·000
1659*	3082	XXIII. 31	8105	6 Piscium .....γ	3·8	80·95	43	23 11 12·005	+ 3·0593	+ 0·001	+0·0487	+0·197
1660	3090	XXIII. 46	8119	96 Aquarii	5·7	81·81	6	23 13 26·140	+ 3·0996	— 0·004	+0·0111	+0·035
1661	3096	XXIII. 56	8131	62 Pegasi .....τ	4·7	84·00	7	23 14 56·661	+ 2·9610	+ 0·011	+0·0009	+0·001
1662*	3105	XXIII. 63	8144	98 Aquarii .....b^1	4·1	81·60	29	23 16 55·835	+ 3·1669	— 0·012	—0·0086	—0·029
1663	9401	...	...	Lacaille 9401	7¾	83·09	18	23 17 30·302	+ 6·9275	— 1·613	...	...
1664	3114	XXIII. 77	8160	68 Pegasi .....υ	4·6	84·80	5	23 19 38·396	+ 2·9741	+ 0·011	+0·0112	+0·002
1665*	3116	XXIII. 83	8169	8 Piscium .....κ	5·0	81·64	59	23 21 2·226	+ 3·0699	0·000	+0·0041	+0·014
1666	3117	XXIII. 84	8170	9 Piscium	7·2*	...	...	23 21 (21)	+ 3·0705	0·000	+0·0017	...
1667	3120	XXIII. 92	8177	10 Piscium .....θ	4·4	84·81	6	23 22 8·080	+ 3·0503	+ 0·003	—0·0104	—0·002
1668	3122	XXIII. 94	8182	70 Pegasi	4·7	84·00	7	23 23 20·334	+ 3·0266	+ 0·006	+0·0013	+0·001
1669	...	XXIII. 96	8184	Piazzi XXIII. 96 ...	6·3	81·79	6	23 23 35·270	+ 3·0915	— 0·003	...	...
1670	...	XXIII. 103	8193	Piazzi XXIII. 103 ...	6·3	84·79	3	23 25 35·110	+ 3·0889	— 0·002	+0·0126	+0·003
1671*	3130	XXIII. 114	8202	101 Aquarii .....b^3	4·7	80·35	27	23 27 15·475	+ 3·1476	— 0·012	—0·0033	—0·015
1672	9464	...	...	Lacaille 9464	7¾	82·50	19	23 28 7·885	+ 6·6488	— 1·901	...	...
1673*	...	XXIII. 126	8214	M. 974	6·5	79·84	18	23 29 36·130	+ 3·0976	— 0·004	—0·0021	—0·011
1674	3139	XXIII. 132	8218	16 Piscium	5·6	81·78	7	23 30 31·150	+ 3·0680	+ 0·001	—0·0091	—0·029
1675	3143	XXIII. 138	8224	16 Andromedæ .....λ	4·0	79·85	7	23 31 56·126	+ 2·9043	+ 0·028	+0·0157	+0·081
1676*	3148	XXIII. 145	8233	17 Piscium .....ι	4·3	80·71	62	23 34 2·019	+ 3·0592	+ 0·003	+0·0234	+0·100
1677	3149	XXIII. 151	8237	19 Andromedæ .....κ	4·4	83·50	13	23 34 44·748	+ 2·9319	+ 0·026	+0·0069	+0·010
1678	3153	XXIII. 158	8243	18 Piscium .....λ	4·7	84·84	5	23 36 10·736	+ 3·0696	+ 0·001	—0·0107	—0·002
1679*	3154	XXIII. 159	8246	105 Aquarii.....ω^2	4·7	80·74	23	23 36 45·468	+ 3·1091	— 0·008	+0·0053	+0·023
1680	9560	...	8249	Lacaille 9560	6·1	83·01	17	23 37 39·622	+ 3·7700	— 0·231	...	...

1649, h^1 Aquarii in B.A.C.
1668, q Pegasi in B.A.C.

1652, 1662. Fundamental Stars for Southern Zones.
1671. Fundamental Star for Southern Zones : b^4 Aquarii in B.A.C.

No.	Mean Date. 1800+	No. of Obs.	Mean Dec. 1885·0.	Annual Precession. 1885·0.	Secular Variation. 1885·0.	Annual Proper Motion. μ_δ.	Corr. for μ_δ to 1885·0.	Fallows and Henderson.	Johnson.	Cape Catalogues. 1840.	1850.	1860.	1880.	A.G.C. 1875.	Melbourne, 1870 and 1880.
			° ′ ″	″	″	″	″								
1646	82·70	11	− 36 30 56·49	+19·334	+ 0·12	...	...	...	...	...	...	...	12002	31353	...
1647	83·18	17	− 80 6 2·85	+19·346	+ 0·19	...	...	...	...	2821	4619	...	12005	31360	...
1648	82·17	24	+ 14 35 12·09	+19·348	+ 0·11	− 0·030	−0·08	*145*	...	2822	4620	1120	12006	...	1174*
1649*	81·88	12	− 8 18 51·20	+19·351	+ 0·11	+ 0·022	+0·07	395	...	...	4621	1121	12008	31367	*1132*
1650	84·86	5	− 44 8 28·05	+19·379	+ 0·12	− 0·07*	−0·01	...	577	2824	4625	1122	12013	31380	1176
1651	80·82	3	− 0 55 4·04	+19·412	+ 0·11	...	...	...	...	...	...	...	...	31412	..
1652*	82·61	19	− 21 47 47·02	+19·443	+ 0·11	+ 0·054	+0·13	...	579	...	4637	...	12032	31431	*1137*
1653	84·69	7	− 45 52 9·12	+19·454	+ 0·11	− 0·04*	−0·01	397	580	...	4641	1124	12038	31445	1181
1654	82·79	12	− 36 1 19·11	+19·457	+ 0·11	...	...	...	...	...	...	...	...	31452	...
1655	83·08	3	+ 8 5 45·68	+19·498	+ 0·10	0·000	0·00	...	...	...	...	...	...	...	...
1656	84·33	11	− 6 40 8·00	+19·547	+ 0·09	− 0·184	−0·12	399	582	2832	4647	1126	12060	31521	...
1657	83·49	40	− 88 6 47·36	+19·584	+ 0·36	+ 0·02*	+0·03	*4*	578	2828	4643	1125	12069	31530	1182*
1658	84·83	4	− 58 51 58·08	+19·592	+ 0·10	+ 0·06*	+0·01	400	583	2837	4657	1128	12083	31563	1185
1659	81·85	20	+ 2 39 14·56	+19·601	+ 0·09	+ 0·017	+0·05	...	...	...	...	1129	12088	...	1186*
1660	83·08	3	− 5 45 9·42	+19·640	+ 0·08	+ 0·002	0·00	...	...	...	4669	1132	...	31614	...
1661	84·00	7	+ 23 6 39·08	+19·667	+ 0·08	− 0·014	−0·01	...	...	...	...	...	...	...	...
1662*	82·67	20	− 20 43 41·12	+19·701	+ 0·08	− 0·090	−0·21	404	587	2847	4679	...	12121	31676	*1159*
1663	83·08	19	− 86 20 29·37	+19·710	+ 0·18	...	...	...	...	...	...	...	12124	31672	...
1664	84·80	5	+ 22 46 15·27	+19·743	+ 0·07	+ 0·039	+0·01	...	...	...	...	...	...	...	...
1665	82·39	34	+ 0 37 34·59	+19·764	+ 0·07	− 0·102	−0·27	407	...	2854	...	1134	12151	...	1191*
1666	80·83	2	+ 0 29 28·45	+19·770	+ 0·07	− 0·023	−0·10	...	...	...	...	...	...	...	...
1667	84·81	6	+ 5 44 51·00	+19·781	+ 0·06	− 0·045	−0·01	...	...	...	...	...	12158	...	...
1668*	83·85	9	+ 12 7 34·24	+19·797	+ 0·06	+ 0·030	+0·03	...	...	...	...	...	...	...	...
1669	83·09	3	− 5 9 30·52	+19·801	+ 0·06	...	...	...	...	...	4703	...	...	31795	...
1670*	84·79	3	− 4 42 57·19	+19·828	+ 0·06	− 0·206	−0·04	...	...	...	4709	...	...	31837	...
1671*	80·82	12	− 21 32 59·83	+19·849	+ 0·06	+ 0·014	+0·06	...	590	2860	4717	...	...	31869	*1174*
1672	83·12	18	− 87 2 2·86	+19·860	+ 0·13	...	...	...	...	...	...	...	12199	31876	...
1673	82·53	12	− 8 6 3·16	+19·877	+ 0·06	+ 0·023	+0·06	...	...	...	4723	...	...	31918	*1176*
1674	83·13	3	+ 1 27 49·90	+19·888	+ 0·05	+ 0·061	+0·11	...	...	...	...	1138	...	...	...
1675	83·48	12	+ 45 50 8·68	+19·904	+ 0·04	− 0·425	−0·65	...	...	...	...	...	...	...	...
1676	81·82	22	+ 5 0 12·12	+19·925	+ 0·04	− 0·443	−1·41	*130*	...	2868	...	1140	12234	...	1203*
1677	83·80	12	+ 43 41 50·75	+19·932	+ 0·04	− 0·024	−0·03	...	...	...	...	...	...	...	...
1678	84·84	5	+ 1 8 49·74	+19·945	+ 0·04	− 0·137	−0·02	...	...	...	...	1141	12250	...	...
1679	82·67	17	− 15 10 50·33	+19·950	+ 0·04	− 0·055	−0·13	...	...	2869	4742	...	...	32043	*1185*
1680	83·11	18	− 79 25 47·19	+19·958	+ 0·04	...	...	...	...	2870	...	...	12260	32060	...

1670. Proper Motion from Bonn Observations, Vol. VII.

No.	Bradley or Lacaille.	Piazzi.	B.A.C.	Star's Name.	Mag.	Mean Date. 1800+	No. of Obs.	Mean R.A. 1885·0.	Annual Precession. 1885·0.	Secular Variation. 1885·0.	Annual Proper Motion. μ_a.	Corr. for μ_a to 1885·0.
								h m s	s	s	s	s
1681	3159	XXIII. 165	8255	106 Aquarii ..... i^1	5·3	83·00	10	23 38 14·134	+3·1159	−0·010	+0·0006	+0·001
1682	9563	...	...	Lacaille 9563	7½	83·25	21	23 39 56·011	+4·2869	−0·553	...	...
1683†	9603	XXIII. 192	8275	Sculptoris ..... δ	4·6	80·45	22	23 42 56·021	+3·1270	−0·016	+0·0036	+0·016
1684*	...	XXIII. 200	8285	M. 986	6·3	80·21	13	23 44 18·580	+3·0896	−0·005	+0·0083	+0·040
1685	9607	...	8290	Octantis .... γ^1	5·5	83·90	27	23 45 19·241	+3·7367	−0·331	−0·030*	−0·033
1686*	3172	XXIII. 207	8292	103 Aquarii ..... i^2	5·3	79·83	12	23 45 24·920	+3·1026	−0·010	−0·0006	−0·003
1687	...	...	...	Lalande 46737.....	7·5*	80·81	3	23 45 47·260	+3·0136	+0·003	...	...
1688	...	...	...	Lalande 46742.....	7·7*	80·80	3	23 46 0·510	+3·0665	+0·003	...	...
1689	3174	XXIII. 209	8295	22 Piscium.....	5·9	81·83	6	23 46 4·550	+3·0692	+0·002	0·0000	0·000
1690	3176	XXIII. 212	8299	81 Pegasi ..... ϕ	5·2	84·00	5	23 46 38·274	+3·0463	+0·011	−0·0033	−0·003
1691	...	XXIII. 227	8311	Piazzi XXIII 227....	6·1	81·83	11	23 48 53·480	+3·0730	+0·001	...	...
1692	...	...	...	Lalande 46886.....	8·8*	82·79	40	23 49 41·830	+3·0642	+0·005	...	...
1693	9651	...	8319	Octantis ..... γ^2	6·1	83·93	30	23 51 12·352	+3·4784	−0·298	−0·017*	−0·018
1694*	3189	XXIII. 244	8328	27 Piscium	5·0	80·40	14	23 52 47·147	+3·0755	−0·001	−0·0050	−0·023
1695	...	...	...	B.D. + 7° No. 5103...	9·4*	82·73	3	23 53 5·140	+3·0671	+0·005	...	...
1696	3191	XXIII. 246	8331	28 Piscium ..... ω	4·2	81·16	49	23 53 24·307	+3·0682	+0·005	+0·0087	+0·033
1697†	9678	...	8334	Toucani ..... ϵ	4·3	84·81	4	23 53 55·898	+3·1527	−0·070	...	...
1698	...	...	...	B.D. + 7° No. 5157...	9·5*	82·85	2	23 54 43·680	+3·0679	+0·006	...	...
1699	...	...	...	B.D. + 8° No. 5159...	9·3*	82·85	2	23 55 26·500	+3·0683	+0·006	...	...
1700	...	...	...	B.D. + 7° No. 5117...	9·2*	82·76	4	23 55 26·630	+3·0688	+0·006	...	...
1701	...	...	...	W.B. XXIII. 1112....	9·3*	82·73	3	23 55 51·960	+3·0686	+0·006	...	...
1702	3196	XXIII. 255	8346	29 Piscium	5·1	83·03	11	23 55 55·813	+3·0739	0·000	−0·0002	0·000
1703	...	...	...	B D. + 7° No. 5118...	9·0*	82·76	3	23 56 0·270	+3·0692	+0·006	...	...
1704	...	...	...	B.D. + 7° No. 5119...	9·5*	82·83	4	23 56 16·170	+3·0693	+0·006	...	...
1705	...	...	...	W.B. XXIII. 1121....	9·0*	82·79	3	23 56 19·370	+3·0693	+0·006	...	...
1706	...	...	...	B.D + 7° No. 5122...	9·5*	82·85	3	23 56 47·020	+3·0699	+0·006	...	...
1707	...	...	...	W.B. XXIII. 1139....	8·5*	82·82	3	23 56 48·050	+3·0690	+0·007	...	...
1708	...	...	...	B.D + 8° No. 5165...	9·5*	82·83	3	23 57 5·170	+3·0696	+0·006	...	...
1709	...	...	...	Lalande 47160.....	8·5*	82·75	2	23 57 10·570	+3·0702	+0·006	...	...
1710*	3204	XXIII. 264	8358	2 Ceti	4·6	80·44	27	23 57 50·864	+3·0765	−0·008	−0·0001	0·000
1711	...	...	...	W.B. XXIII. 1187....	9·0*	82·79	3	23 59 18·980	+3·0717	+0·007	...	...
1712	...	...	...	B.D. + 8° No. 5170...	9·5*	82·83	3	23 59 25·160	+3·0719	+0·006	...	...
1713	3208	XXIII. 272	8368	33 Piscium	4·6	84·75	8	23 59 26·915	+3·0728	−0·001	−0·0019	0·000

1686. B A.C. gives no letter : i_2 in A.G.C.

No.	Mean Date. 1800+	No. of Obs.	Mean Dec. 1885·0.	Annual Precession. 1885·0.	Secular Variation. 1885·0.	Annual Proper Motion. μ_δ.	Corr. for μ_δ to 1885·0.	Fallows and Henderson.	Johnson.	Cape Catalogues. 1840.	1850.	1860.	1880.	A.G.C. 1875.	Melbourne, 1870 and 1880.
			° ′ ″	″	″	″	″								
1681	84·41	6	— 18 54 54·92	+19·963	+ 0·03	— 0·011	—0·01	415	596	...	4746	...	12269	32076	...
1682	83·24	25	— 84 30 5·44	+19·977	+ 0·05	...	...	...	...	...	...	...	12272	32098	...
1683	82·07	15	— 28 45 58·29	+19·998	+ 0·03	— 0·097	—0·28	417	597	2876	4756	1145	12297	32161	1210*
1684	82·32	12	— 10 36 58·09	+20·006	+ 0·02	+ 0·090	+0·24	...	...	...	4759	...	12306	32188	*1191*
1685	84·05	32	— 82 39 28·16	+20·012	+ 0·03	— 0·03*	—0·03	*10*	598	2879	4763	1147	12313	32200	1212*
1686*	82·47	11	— 19 32 54·98	+20·013	+ 0·02	+ 0·002	+0·01	...	...	2880	4764	...	...	32204	*1194*
1687	80·81	3	+ 4 3 27·12	+20·015	+ 0·02	...	...	...	...	...	...	...	...	...	...
1688	80·80	3	+ 4 6 19·60	+20·016	+ 0·02	...	...	...	...	...	...	...	...	...	...
1689	83·12	3	+ 2 17 28·00	+20·017	+ 0·02	— 0·011	—0·02	...	...	...	...	1148	...	...	...
1690	84·00	5	+ 18 28 54·23	+20·019	+ 0·02	— 0·042	—0·04	...	...	...	...	...	...	...	...
1691	81·85	2	— 0 31 48·22	+20·030	+ 0·01	...	...	...	...	...	4773	...	...	32262	...
1692	82·79	40	+ 7 44 25·65	+20·033	+ 0·01	...	...	...	...	...	...	...	...	...	*1199*
1693	84·03	35	— 82 48 33·50	+20·039	+ 0·01	— 0·03*	—0·03	418*	599	2883	4776	1151	12360	32303	1217*
1694	82·07	12	— 4 11 38·68	+20·043	+ 0·01	— 0·057	—0·17	419	601	2885	4781	1153	12373	32330	*1202*
1695	82·73	3	+ 7 27 21·27	+20·044	+ 0·01	...	...	...	...	...	...	...	...	...	...
1696	81·67	18	+ 6 13 36·31	+20·045	0·00	— 0·108	—0·36	...	...	2886	...	1154	12380	...	1221*
1697	84·81	4	— 66 13 0·26	+20·047	0·00	...	...	420	602	2887	4785	1155	12389	32347	1222
1698	82·82	4	+ 8 31 20·12	+20·048	0·00	...	...	...	...	...	...	...	...	...	...
1699	82·85	2	+ 8 43 50·79	+20·049	0·00	...	...	...	...	...	...	...	...	...	...
1700	82·76	4	+ 7 45 13·07	+20·049	0·00	...	...	...	...	...	...	...	...	...	*1206*
1701	82·73	3	+ 8 59 0·27	+20·050	0·00	...	...	...	...	...	...	...	...	...	...
1702	83·09	12	— 3 40 3·58	+20·050	0·00	— 0·002	0·00	421	603	...	4791	1156	12406	32379	*1207*
1703	82·76	3	+ 7 53 29·75	+20·050	0·00	...	...	...	...	...	...	...	...	...	...
1704	82·83	4	+ 8 7 13·96	+20·051	0·00	...	...	...	...	...	...	...	...	...	...
1705	82·79	3	+ 8 20 20·22	+20·051	0·00	...	...	...	...	...	...	...	...	..	...
1706	82·85	3	+ 7 34 19·60	+20·052	0·00	...	...	...	...	...	...	...	...	...	...
1707	82·82	3	+ 10 16 1·27	+20·052	0·00	...	...	...	...	...	...	...	...	...	...
1708	82·83	3	+ 9 9 16·61	+20·052	0·00	...	...	...	...	...	...	...	...	...	...
1709	82·75	2	+ 7 37 54·77	+20·052	0·00	...	...	...	...	...	...	...	...	...	...
1710	82·58	12	— 17 58 34·26	+20·053	0·00	+ 0·005	+0·01	422	605	2890	4798	...	12416	32405	*1209*
1711	82·79	3	+ 9 47 43·82	+20·053	— 0·01	...	...	...	...	...	...	...	...	...	...
1712	82·83	3	+ 8 32 27·44	+20·053	— 0·01	...	...	...	...	...	...	...	...	...	...
1713	84·75	8	— 6 21 3·68	+20·053	— 0·01	+ 0·096	+0·02	424	606	2891	4805	1158	12431	32431	...

APPENDIX I.

A CATALOGUE

OF

SOUTHERN CIRCUMPOLAR STARS FOR 1885·0,

FROM OBSERVATIONS MADE AT THE

ROYAL OBSERVATORY, CAPE OF GOOD HOPE,

DURING THE YEARS 1881–88.

No.	Star's Name.	Mag.	R.A. uncorrected for Proper Motion.	Mean Date.	No. of Obs.	N.P.D. uncorrected for Proper Motion.	Mean Date.	No. of Obs.
			h m s	1800+		° ′ ″	1800+	
1	Lacaille 9745	7¾	0 2 34·71	87·10	20	176 40 45·78	87·46	14
2	γ^3 Octantis	5·6	0 4 47·97	84·87	23	172 51 48·11	85·23	16
3	o Octantis	7·3	0 12 44·84	86·40	22	179 0 8·41	87·26	10
4	β Hydri	2·7	0 19 41·81	85·40	24	167 54 6·37	85·59	22
5	Lacaille 248	7	0 39 47·54	85·85	12	176 19 52·98	85·85	12
6	λ Hydri	5·6	0 44 35·82	85·09	12	165 32 58·81	86·53	6
7	Lacaille 505	6·3	1 32 53·99	86·20	24	169 5 19·02	86·20	24
8	Lacaille 634	6·1	1 44 8·64	86·21	22	175 20 59·92	86·14	20
9	τ^2 Hydri	6·1	1 48 52·84	86·12	19	170 44 40·72	86·10	18
10	σ Hydri	6·3	1 56 3·71	85·76	9	168 54 38·29	85·55	8
11	Lacaille 709	6·7	2 10 22·60	85·12	14	167 9 49·08	86·57	8
12	Lacaille 1029	7½	2 37 54·62	84·78	20	176 13 34·48	85·44	14
13	ν Hydri	5·1	2 51 13·48	85·71	29	165 32 11·78	85·58	24
14	Lacaille 1105	6¼	3 11 29·05	85·92	12	169 25 31·22	85·59	8
15	Lacaille 1848	7½	3 13 9·87	88·11	22	178 37 45·35	87·59	10
16	ι Hydri	5·9	3 18 50·65	87·16	17	167 48 27·97	85·61	8
17	Lacaille 1222	7½	3 31 27·92	85·96	22	168 0 16·01	85·47	14
18	Cape (1880) 1521	6·1	3 34 11·85	88·57	9	168 44 11·09	88·60	2
19	Lacaille 1414	8¼	3 45 1·20	85·05	16	175 5 38·12	85·12	8
20	Lacaille 1592	6·5	4 3 54·63	85·41	15	175 35 59·09	84·62	10
21	Lacaille 1444	6·8	4 7 53·92	85·93	15	168 56 25·87	85·31	6
22	δ Mensæ	5·8	4 25 46·94	87·56	21	170 28 55·01	86·97	12
23	Lacaille 1839	8¼	4 33 25·90	87·57	17	176 31 20·87	84·66	2
24	Lacaille 1707	6·9	4 36 18·29	88·26	24	173 8 43·74	88·66	2
25	η Mensæ	6·0	4 58 29·94	88·11	13	165 6 47·4	(82·48)	11
26	ξ Mensæ	5·8	5 11 59·79	88·41	12	172 37 18·5	(82·55)	12
27	Lacaille 2066	6·8	5 25 0·20	88·56	14	173 59 19·5	(82·25)	11
28	π Mensæ	5·8	5 46 20·80	87·69	8	170 33 17·6	(82·17)	15
29	Lacaille 2296	6·1	5 52 29·62	86·72	24	174 50 19·9	(82·53)	16
30	κ Mensæ	5·5	5 58 2·52	87·13	6	169 22 48·0	(82·28)	10
31	Cape (1880) 2901	7-8	6 9 56·65	86·82	7	178 21 29·1	(81·86)	12
32	Lacaille 2512	6·8	6 10 5·33	87·99	20	175 55 42·1	(82·67)	5
33	Lacaille 2426	7¼	6 20 23·47	88·62	10	172 0 17·8	(82·14)	10
34	ζ Mensæ	5·8	6 49 35·99	85·74	18	170 41 26·9	(82·52)	15
35	Lacaille 3274	6·7	7 26 55·91	84·73	21	176 50 22·38	86·28	6

No.	Star's Name.	Mag.	R.A. uncorrected for Proper Motion.	Mean Date.	No. of Obs.	N.P.D. uncorrected for Proper Motion.	Mean Date.	No. of Obs.
			h m s	1800+		o ′ ″	1800+	
36	Lacaille 3238	6·8	7 56 41·03	85·57	11	171 17 47·98	86·30	2
37	Lacaille 3911	7¾	8 3 46·17	85·06	18	178 31 56·97	85·81	8
38	θ Chamæleontis	4·7	8 24 4·20	85·84	21	167 6 46·50	85·57	16
39	Lacaille 3537	6·2	8 31 5·98	85·91	27	170 32 9·68	85·63	17
40	η Chamæleontis	5·6	8 45 12·20	86·40	12	168 32 42·83	86·35	6
41	ζ Octantis	5·7	9 13 10·52	84·76	38	175 12 3·69	86·08	14
42	ζ Chamæleontis	5·5	9 37 13·68	85·71	23	170 25 26·87	85·58	20
43	Lacaille 4169	7·1	9 47 13·72	84·76	9	175 29 2·74	86·39	4
44	μ Chamæleontis	6·0	10 3 45·09	85·49	18	171 39 27·84	85·08	12
45	Lacaille 4510	6·9	10 37 39·60	84·30	20	175 29 39·79	85·93	8
46	δ^2 Chamæleont's	4·9	10 44 41·56	85·23	15	169 56 0·76	85·10	12
47	Lacaille 4578	8½	10 46 48·16	83·44	18	176 17 37·45	86·43	4
48	η Octantis	6·3	11 0 5·14	84·93	16	173 58 30·86	85·01	14
49	Lacaille 4784	7¾	11 23 41·00	85·35	15	174 19 19·90	85·78	6
50	π Chamæleontis	6·2	11 32 31·48	84·41	12	165 15 34·98	85·47	4
51	Lacaille 4865	7½	11 34 48·03	84·28	13	174 50 59·73	85·96	8
52	ϵ Chamæleontis	5·0	11 53 55·74	84·80	22	167 34 52·28	85·47	10
53	Lacaille 4991	6·6	11 56 36·48	85·24	19	174 59 28·88	85·47	12
54	β Chamæleontis	4·6	12 11 37·29	85·28	15	168 40 25·07	85·84	12
55	Lacaille 5235	7½	12 36 10·63	85·41	18	179 10 4·66	85·35	14
56	ι Octantis	6·0	12 43 0·50	85·40	18	174 29 53·22	85·52	16
57	Lacaille 5325	7¼	12 55 9·24	85·80	24	176 56 27·74	85·79	22
58	Lacaille 5406	6·3	13 4 45·54	85·67	32	167 50 10·02	85·92	20
59	κ Octantis	5·7	13 22 31·08	85·91	34	175 11 43·40	86·03	24
60	Lacaille 5633	6·6	13 41 3·61	86·16	22	172 5 42·77	86·13	20
61	θ Apodis	Var.	13 54 9·25	86·45	15	166 14 26·55	86·55	10
62	η Apodis	5·3	14 3 51·40	87·25	8	170 28 0·8	...	...
63	Cape (1880) 7731	8½	14 3 56·43	85·97	14	178 50 59·60	85·74	10
64	δ Octantis	4·7	14 8 36·47	85·11	18	173 8 20·86	84·57	14
65	z Octantis	6·8	14 33 0·66	85·80	28	177 40 36·06	85·57	20
66	α Apodis	4·0	14 33 37·48	86·76	9	168 33 17·34	86·58	4
67	π^2 Octantis	5·9	14 44 52·45	85·60	30	172 34 28·75	85·42	24
68	ρ Octantis	5·9	15 16 56·26	85·47	23	174 4 41·45	85·41	20
69	Lacaille 6484	6·7	15 43 56·13	85·88	14	167 41 8·09	86·62	10
70	δ^1 Apodis	5·2	16 3 11·92	85·73	14	168 24 11·20	85·84	10

61. Limits of Magnitude 5½–6½ in *Uranometria Argentina.*

No.	Star's Name.	Mag.	R.A. uncorrected for Proper Motion.	Mean Date.	No. of Obs.	N.P.D. uncorrected for Proper Motion.	Mean Date.	No. of Obs.
			h m s	1800+		° ′ ″	1800+	
71	δ^2 Apodis	5·5	16 3 19·08	87·27	9	168 22 31·38	86·63	6
72	γ Apodis	3·9	16 15 50·50	86·32	14	168 38 9·32	85·64	8
73	Lacaille 6545	6·2	16 18 17·08	86·60	29	176 8 36·66	86·64	18
74	β Apodis	4·5	16 26 40·53	86·92	22	167 16 26·48	86·90	8
75	Lacaille 6948	6·8	16 45 6·27	87·88	13	166 1 44·0	(82·67)	11
76	Cape (1880) 9273	8	16 58 27·78	87·29	14	177 16 31·0	(81·36)	7
77	Lacaille 7088	6·4	17 9 58·47	87·62	16	170 44 54·30	86·02	6
78	Lacaille 7078	6·4	17 25 19·03	87·21	14	175 9 49·4	(82·14)	15
79	Lacaille 7184	8	17 30 22·76	88·41	12	173 11 17·2	(82·21)	9
80	χ Octantis	5·8	17 47 8·80	87·16	32	177 39 38·27	85·71	6
81	Lacaille 7348	6·5	17 56 4·68	86·73	10	174 25 14·6	(82·54)	17
82	σ Octantis	5·8	18 33 28·65	86·41	41	179 16 16·91	86·68	28
83	Lacaille 7751	8½	18 56 3·54	84·64	21	174 55 0·8	(82·30)	15
84	Cape (1880) 10460	7·0	19 12 21·16	88·60	8	171 58 56·9	...	...
85	Lacaille 8094	6·9	19 34 46·29	85·37	20	171 38 2·88	86·29	6
86	Lacaille 8202	6·4	20 0 12·44	87·72	11	173 39 41·5	...	...
87	Lacaille 8257	7·0	20 14 59·87	84·33	23	174 47 37·61	85·82	8
88	Lacaille 8360	6·5	20 18 46·89	85·85	17	171 40 29·05	85·52	10
89	α Octantis	5·6	20 50 44·59	85·45	21	167 27 37·51	85·78	14
90	Lacaille 8615	6·8	20 55 28·62	86·35	8	166 40 8·86	86·36	6
91	B Octantis	6·7	21 18 44·20	84·60	39	179 22 59·99	86·36	20
92	λ Octantis	5·7	21 33 9·75	86·06	20	173 14 44·94	86·09	14
93	Lacaille 8927	6·6	21 49 48·77	84·94	13	168 12 39·91	85·40	8
94	υ Octantis	6·4	22 9 18·76	84·34	32	176 33 2·35	84·90	16
95	Lacaille 9123	8¼	22 31 9·37	84·07	22	174 20 31·24	85·91	8
96	β Octantis	4·4	22 34 13·79	84·87	13	171 59 0·78	84·83	10
97	Lacaille 9332	6·3	22 58 58·84	84·55	9	170 6 2·83	85·43	4
98	τ Octantis	6·0	23 10 18·83	84·68	35	178 6 47·20	85·28	24
99	Lacaille 9401	7¾	23 17 30·45	84·33	13	176 20 29·13	85·45	8
100	Lacaille 9464	7¾	23 28 8·24	85·94	12	177 2 3·35	86·19	8
101	Lacaille 9560	6·1	23 37 39·54	84·32	11	169 25 48·10	85·47	4
102	Lacaille 9563	7½	23 39 56·20	84·81	14	174 30 5·05	85·66	10
103	γ^1 Octantis	5·5	23 45 19·36	85·48	27	172 39 27·71	85·55	22
104	γ^2 Octantis	6·1	23 51 12·40	85·55	29	172 48 32·97	85·46	24

APPENDIX II.

MERIDIAN OBSERVATIONS (DIRECT & REFLEXION)

OF THE STARS

β CENTAURI. a^2 AND a^1 CENTAURI

REDUCED, WITHOUT PROPER MOTION, TO THE EQUINOX,

1885·0.

MERIDIAN OBSERVATIONS OF β AND α CENTAURI.

DIRECT OBSERVATIONS.

Date.		Observer.	R.A.			Declination.		
			β.	α_2.	α_1.	β.	α_2.	α_1.
			h m	h m	h m	′	° ′	° ′
1879.			13 55	14 31	14 31	− 59 49	− 60 21	− 60 21
			s	s	s			
June	21	M	43·05	50·37	...			
	27	M	43·01	...	50·44			
	28	P	42·98	50·16	...			
July	2	P	42·99	...	50·42			
	3	M	42·93	50·24	...			
	7	F	43·12	50·29	...			
	8	P	43·03	50·42	...			
	9	M	...	50·10	...			
	10	G	42·83	...	50·18			
	11	P	42·95	50·37	...			
	12	F	42·85	...	50·32			
	17	F	43·01	...	50·32			
	19	F	42·89	50·12	...			
	21	P	...	...	50·33			
	23	F	42·94	50·13	...			
	24	G	43·19	...	...			
	25	P	...	50·33	...			
	26	F	42·99	...	50·31			
	28	M	42·98	...	50·37			
	31	M	42·79	50·26	...			
August	1	F	43·04	50·23	...			
	2	I	42·94	50·31	...			
	4	F	42·96	...	50·36			
	6	P	...	...	50·23			
	7	M	...	...	50·50			
	8	P	43·03	50·27	...			
	11	I	43·14	...	...			
	12	F	42·84	...	...			
	13	P	43·07	...	50·31			
	14	F	43·20	50·34	...			
	15	M	42·95	50·14	...			
	16	P	43·02	50·20	...			

Date.		Observer.	R.A.			Declination.		
			β.	α_2.	α_1.	β.	α_2.	α_1.
			h m	h m	h m	° ′	° ′	° ′
1879.			13 55	14 31	14 31	−59 49	−60 21	−60 21
			s	s	s			
August	18	F	42·90	...	50·09			
	19	M	42·88	...	50·19			
	20	P	43·02	...	50·18			
	22	P	...	50·42	...			
	23	P	42·96	50·21	...			
	25	F	42·92	50·03	...			
	26	P	42·80	...	50·51			
	27	M	42·98	...	50·19			
	28	M	42·95	50·34	...			
	29	P	43·03	50·25	...			
	30	I	...	50·16	...			
September	1	F	42·84	...	50·16			
	2	P	42·87	...	50·13			
	3	I	42·86	...	50·11			
	4	M	42·87	...	50·14			
	5	M	42·88	50·22	...			
	10	I	42·95	50·01	...			
	13	I	43·11	...	50·24			
	15	P	42·78	50·11	...			
	16	I	42·89	50·00	...			
	17	P	42·83	...	49·99			
	20	F	42·87	50·04	...			
	22	P	42·92	50·05	...			
	23	I	42·91	...	...			
	24	I	42·96	...	50·14			
	25	P	42·83	...	50·11			
	26	I	43·26	50·45	...			
	27	P	43·00	50·28	...			
	30	I	43·14	...	50·15			
October	1	P	42·83	...	50·05			
	3	I	42·84	...	...			
	4	P	42·95	50·19	...			
	6	M	...	50·30	...			
	8	I	43·06	...	...			
	10	M	42·87	...	50·23			
	11	I	42·74	49·92	...			
	13	M	42·68	50·16	...			
	14	I	42·82	...	...			
	16	*	42·99	...	49·95			
	20	P	42·99	50·22	...			
	24	I	43·18	...	50·57			

* On October 16 β Centauri was observed by F, and α_1 Centauri was observed by M.

Date.		Observer.	R.A.			Declination.		
			β.	α_2.	α_1.	β.	α_2.	α_1.
			h m	h m	h m	° ′	° ′	° ′
1879.			13 55	14 31	14 31	−59 49	−60 21	−60 21
			s	s	s			
November	7	P	43·02	...	50·33			
	9	M	42·98	...	50·26			
	24	I	42·81	...	...			
	27	I	43·02	50·19	...			
	28	M	43·12	50·30	...			
December	2	I	43·19	...	50·22			
	5	I	43·05	...	...			
	7	F	42·58	49·94	...			
	15	F	43·03	...	50·15			
	18	F	43·08	50·34	...			
	21	M	42·96	50·34	...			
	22	F	42·82	...	49·99			
	26	F	43·00	50·06	...			
	28	M	42·74	...	50·02			
1880.								
January	1	F	42·99	...	50·18			
	2	F	42·88	50·11	...			
	4	F	42·99	...	50·08			
	9	F	42·91	50·14	...			
	14	F	42·88	...	50·02			
	18	F	42·99	50·06	...			
	19	F	42·95	...	50·16			
	25	F	42·88	49·86	...			
	26	F	42·83	50·14	...			
	28	M	42·76	50·30	...			
February	2	M	42·89	...	49·92			
	3	M	42·94	50·12	...			
	4	M	43·11	...	...			
	5	M	42·68	50·35	...			
	6	M	42·90	...	50·15			
	10	M	42·73	50·35	...			
	11	M	42·71	...	50·06			
	14	M	42·61	49·75	...			
	23	F	42·80	50·03	...			
	24	F	...	...	50·35			
	25	M	42·90	50·01	...			
	27	M	42·62	...	49·80			

Date.		Observer.	R.A.			Declination.		
			β.	α_2.	α_1.	β.	α_2.	α_1.
1880.			h m 13 55	h m 14 3	h m 14 31	° ′ − 59 49	° ′ − 60 21	° ′ − 60 21
			s	s	s	″	″	″
March	4	M	42·98	50·17	...			
	7	M	42·75	...	49·88			
	11	M	42·82	49·70	...			
	14	M	42·79	...	49·72	...	...	...
	21	M	...	49·94	...	...	...	...
	22	F	42·67	49·87	...	1·71	37·23	43·04
	30	M	42·92	...	50·05	1·99	35·80	43·17
	31	P	43·06	50·09	...	2·35	37·54	43·88
April	2	P	43·11	...	49·95	3·00	36·73	44·29
	4	M	43·22	50·00	...	...	...	...
	15	M	...	...	50·58	...	...	...
	16	F	43·16	50·23	...	...	...	...
	19	P	43·05	50·22	...	3·10	35·94	43·84
	20	M	43·07	50·20	...	2·43	36·30	42·91
	23	M	43·15	...	49·79	2·11	36·20	42·49
	26	P	43·27	...	50·13	2·06	37·22	43·95
	27	M	42·87	50·05	...	3·23	36·62	42·14
May	1	M	42·90	...	49·91	2·28	36·60	43·19
	3	M	42·98	50·04	...	1·80	36·90	42·34
	5	P	43·13	50·22	...	2·29	35·95	43·79
	7	M	43·06	49·90	...	2·40	36·05	42·22
	8	P	43·09	...	...	...	...	...
	11	P	43·15	...	50·07	3·32	35·92	42·05
	12	M	43·12	...	...	2·60	...	...
	18	M	43·20	...	50·02	2·02	36·89	42·48
	19	I	43·04	50·09	...	2·61	37·71	43·83
	20	P	43·06	50·10	...	2·36	36·82	43·00
	21	I	43·00	...	49·80	1·56	37·27	41·86
	25	M	43·11	50·25	...	2·48	36·21	41·54
	26	P	43·05	50·16	...	2·65	35·79	42·73
June	7	P	43·08	...	49·90	2·86	36·05	42·97
	11	P	43·17	49·96	...	2·87	36·69	43·06
	12	I	43·10	...	...	...	...	...
	14	I	43·00	...	...	...	...	...
	17	I	42·95	...	...	...	...	...
	18	M	43·19	...	49·74	3·50	35·13	41·42
	21	I	43·02	...	...	...	...	...
	30	I	...	..	...	2·24	...	...

Date.		Observer.	R.A.			Declination.		
			β.	a_2.	a_1.	β.	a_2.	a_1.
			h m	h m	h m	°	° ′	° ′
1880.			13 55	14 31	14 31	− 59 49	− 60 21	− 60 21
			s		s	″	″	″
July	2	M	43·07	...	...	0·91	...	...
	5	M	42·89	49·61	...	1·51	35·26	41·10
	24	P	43·18	50·02	...	2·02	34·83	41·73
	26	P	43·07	...	49·80	2·34	36·41	42·16
	27	M	43·03	...	49·67	2·08	35·67	41·83
	28	I	43·20	49·96	...	1·71	36·34	42·69
	29	P	43·16	50·11	...	2·59	36·05	42·35
	30	P	...	...	...	2·35	36·29	42·81
	31	I	42·92	...	49·68	2·61	36·08	42·29
August	4	I	42·90	49·71	...	2·66	35·22	41·95
	7	M	43·21	50·06	...	2·65	35·73	41·74
	10	M	43·13	...	49·50	2·62	35·42	41·16
	11	P	42·90	...	49·58	2·63	36·89	41·98
	13	M	43·11	49·68	...	1·50	35·70	41·63
	14	P	43·07	49·91	...	2·13	35·61	41·56
	17	P	43·07	...	49·78	2·72	36·47	42·07
	24	M	42·98	...	...	1·80	...	...
	30	I	43·04	...	49·56	1·83	35·02	40·83
September	1	M	42·94	...	49·57	1·84	35·03	41·21
	6	P	42·99	49·79	...	2·50	35·94	41·19
	7	M	43·04	49·75	...	1·17	34·62	40·53
	8	I	43·13	49·68	...	0·92	35·35	41·19
	9	P	43·20	..	49·89	2·25	35·34	41·17
	10	M	43·08	...	49·74	1·43	35·28	41·31
	11	I	...	...	...	2·09	35·58	41·36
	14	I	42·88	49·49	...	1·96	34·37	40·91
	16	M	42·76	49·49	...	1·49	35·49	40·19
	21	P	...	...	49·43	2·14	35·17	42·28
	22	M	...	...	49·57	2·29	35·03	41·14
	23	I	42·95	...	49·44	1·04	35·72	42·14
	30	M	42·82	49·56	...	2·26	34·90	40·46
October	1	P	42·95	...	49·64	2·42	35·27	41·12
	2	I	43·15	49·75	...	1·55	35·03	41·18
	4	F	43·08	...	...	...	...	...
	5	M	43·16	...	50·17	2·38	35·58	41·75
	6	P	43·13	49·92	...	2·02	34·72	41·18

Date.		Observer.	R.A.			Declination.		
			β.	α_2.	α_1.	β.	α_2.	α_1.
1880.			h m 13 55	h m 14 31	h m 14 31	° ′ − 59 49	° ′ − 60 21	° ′ − 60 21
			s	s	s	″		′
October	7	I	43·13	...	...	1·89	...	...
	8	M	42·84	49·72	...	1·86	34·48	40·63
	9	P	43·01	...	49·71	1·99	33·57	41·40
	13	M	42·99	...	49·51	1·73	34·71	41·40
	14	I	42·62	...	49·13	1·05	35·52	41·58
	15	P	42·80	49·67	...	1·22	34·51	41·10
	19	M	42·87	49·69	...	...	...	...
	22	I	42·98	49·74	...	2·64	35·82	42·76
	23	M	43·01	...	49·58	2·93	35·62	41·43
	25	P	42·95	...	...	2·75	...	...
	26	P	43·29	...	49·58	1·31	35·57	41·79
	27	I	...	...	49·83	...	33·62	41·48
	28	P	42·99	...	...	1·03	...	...
	29	P	...	49·63	...	...	34·13	39·63
	31	M	...	49·44	...	2·26	36·63	...
November	1	I	43·28	49·93	...	0·70	34·53	41·49
	2	P	43·03	...	49·55	1·83	34·67	40·91
	4	I	42·99	...	50·12	2·04	34·30	41·78
	10	M	42·91	...	49·70	1·78	35·10	41·51
	12	P	42·92	49·82	...	2·84	35·16	41·63
	15	P	42·99	...	...	3·66	...	...
	17	I	43·08	49·68	...	2·23	34·92	41·97
	18	P	43·03	...	49·80	2·62	34·27	40·46
	19	M	42·89	49·77	...	0·48	36·11	42·27
	21	M	42·73	...	49·42	1·01	36·71	43·08
	23	I	42·93	...	49·65	1·61	33·00	40·63
	24	M	42·76	49·68	...	1·53	35·01	40·25
	25	P	42·92	49·67	...	1·39	34·17	40·95
	29	I	42·76	49·47	...	1·70	34·91	41·86
	30	P	42·74	...	...	...	...	...
December	3	P	42·94	...	49·48	1·59	34·87	41·94
	7	F	42·90	49·64	...	1·62	34·75	39·97
	8	P	42·82	49·66	...	1·69	33·80	41·81
	12	M	42·64	...	49·59	1·81	35·67	42·20
	14	P	42·90	...	49·49	2·91	34·88	42·55
	15	M	42·76	49·43	...	3·11	36·20	42·02
	16	F	42·70	...	49·37	2·07	35·58	41·10
	22	P	42·86	49·68	...	1·92	35·49	41·85
	30	M	43·12	...	49·57	...	...	...

Date.		Observer.	R.A.			Declination.		
			β.	α_2.	α_1.	β.	α_2.	α_1.
			h m	h m	h m	° ′	° ′	° ′
1881.			13 55	14 31	14 31	− 59 49	− 60 21	− 60 21
			s	s	s	″	″	″
January	7	P	42·94	49·60	...	3·11	37·66	43·93
	11	P	42·87	...	49·46	2·40	35·29	41·91
	12	P	42·91	49·63	...	2·39	35·03	41·31
	19	P	42·92	49·58	...	2·51	34·92	42·31
	20	P	42·91	...	49·48	2·36	34·93	41·88
	21	F	42·83	49·62	...	...	...	...
February	1	P	42·66	49·43	...	3·25	36·10	43·34
	6	P	42·89	...	49·51	2·52	35·57	43·24
	9	P	43·02	49·52	...	2·71	35·65	43·07
	13	P	42·94	...	49·50	3·52	35·28	44·08
	18	M	42·87	49·71	...	5·72	35·13	42·44
	23	M	42·79	...	49·60	2·58	36·61	43·83
	24	P	42·89	49·43	...	3·74	33·87	42·47
	27	P	42·69	...	49·51	...	...	...
March	1	M	43·21	49·32	...	4·39	35·50	41·95
	3	P	42·88	...	...	...	...	...
	6	M	43·08	...	49·52	2·96	34·62	42·91
1882.								
June	20	C	...	48·92	...	...	34·41	...
	26	C	43·04	...	...	2·18	...	...
July	10	C	...	48·91	...	...	33·63	...
	12	C	...	49·05	...	...	32·05	...
August	8	M	...	48·83	...	...	33·88	...
1883.								
May	28	P	43·16	...	...	2·21	...	...
	30	M	43·25	...	...	1·62	...	...
June	8	M	43·16	...	...	2·63	...	...
	18	R	...	48·41	...	...	34·17	...
	21	R	42·81	...	...	3·21	...	...
	28	P	43·16	...	...	2·93	...	...
	29	M	43·00	...	...	4·38	...	...

Date.		Observer.	R.A.			Declination.		
			β.	α_2.	α_1.	β.	α_2.	α_1.
			h m	h m	h m	° ′	° ′	° ′
1883.			13 55	14 31	14 31	− 59 49	− 60 21	− 60 21
			s	s	s	″	″	″
July	4	M	42·85	...	...	3·37	...	...
	9	M	42·95	...	...	3·69	...	...
	11	P	43·13	...	...	1·59	...	...
	12	M	42·98	...	...	2·32	...	...
	14	P	42·91	48·47	...	2·90	33·06	...
	20	P	...	48·62	...	...	31·60	...
	21	R	...	48·44	...	...	30·99	...
	23	R	...	48·46	...	...	32·07	...
	25	M	...	48·55	...	...	32·86	...
	28	M	...	48·54	...	...	32·69	...
August	7	P	...	48·42	...	...	31·70	...
			h m	h m	h m	° ′	° ′	° ′
1884.			13 55	14 31	14 31	− 59 49	− 60 21	− 60 21
			s	s	s	″	″	″
February	26	M	...	48·20	...	...	30·24	...
March	3	C	42·93	...	...	1·51	...	...
	21	C	...	48·31	...	...	30·98	...
	24	R	42·95	...	...	1·90	...	...
	27	C	43·11	...	...	2·02	...	...
April	3	M	42·92	...	...	1·76	...	...
May	26	C	...	48·01	...	...	32·16	...
June	30	M	42·80	...	...	2·79	...	...
July	3	P	43·14	...	...	2·46	...	...
	9	P	...	48·01	...	...	30·59	...

OBSERVATIONS BY REFLECTION WITHOUT CORRESPONDING DIRECT OBSERVATIONS.

Date.		Observer.	R.A.			Declination.		
			β.	α_2.	α_1.	β.	α_2.	α_1.
1884.			h m 13 55	h m 14 31	h m 14 31	° ′ − 59 49	° ′ − 60 21	° ′ − 60 21
			s	s	s	″	″	″
March	14	M	...	48·40	...	...	29·81	...
April	1	C	...	48·13	...	...	30·10	...
	4	P	42·95	...	...	2·36	...	...
	24	C	...	48·26	...	...	31·04	...
	30	R	42·91	...	47·41	2·39	...	44·36
May	15	C	43·04	...	...	2·10	...	...
	16	M	43·07	...	...	0·85	...	...
	19	C	42·74	...	...	3·19	...	...
June	4	P	...	48·12	...	...	31·87	...
	9	M	...	47·59	...	...	30·68	...
	13	M	42·74	...	...	1·65	...	...
	18	P	...	47·97	...	...	31·69	...

OBSERVATIONS R AND D AT SAME TRANSIT.

Date.		Observer.	β.		α_2.		α_1.	
			R.	D.	R.	D.	R.	D.
1881.			° ′ − 59 49	° ′ − 59 49	° ′ − 60 21	° ′ − 60 21	° ′ − 60 21	° ′ − 60 21
			″	″	″	″	″	″
November	4	P	1·84	1·15	32·52	32·52	...	...
	6	P	1·69	1·29	33·45	32·97	...	...
	7	P	1·19	2·09	32·64	33·63	...	...
	8	P	3·44	2·24	34·50	33·14	...	...
	13	P	2·84	1·66	33·10	33·08	...	...
	18	P	1·42	1·41	33·30	33·28	...	...
	21	P	2·72	1·89	...	...	...	...
	24	P	2·05	1·61	33·27	32·84	...	...
	28	P	2·50	1·62	33·93	33·40	...	...

OBSERVATIONS R AND D AT SAME TRANSIT—*continued.*

Date.		Observer.	β.		a_2.		a_1.	
			R.	D.	R.	D.	R.	D.
1881.			° ′ − 59 49	° ′ − 59 49	° ′ − 60 21	° ′ − 60 21	° ′ − 60 21	° ′ − 60 21
December	1	P	″ 1·89	″ 2·40	″ 33·56	″ 34·15	″ ...	″ ...
	4	P	1·34	1·38	32·68	32·79	...	...
	8	P	2·18	1·49	33·26	33·54	...	...
	9	P	1·02	1·09	33·06	34·05	...	...
	13	P	2·39	1·84	34·50	33·52	...	...
1883.								
January	19	M	1·04	3·07	33·06	33·08	42·86	42·56
	21	M	2·04	2·55	32·58	33·02	42·70	42·58
	22	P	2·22	2·27	33·48	33·17	43·28	42·62
	25	M	2·61	1·99	33·23	31·85	42·58	42·67
	26	P	1·79	1·95	31·77	31·45	42·56	42·50
	29	M	[5·63]	0·59	32·08	32·59	42·23	42·66
	30	P	1·99	1·73	...	...	...	...
February	4	P	3·22	2·11	32·93	32·54	43·20	41·90
	8	P	2·51	3·07	33·30	32·78	43·02	42·86
October	1	M	2·49	2·71	32·43	32·30	...	...
	2	P	2·45	2·30	30·92	30·65	...	...
	3	M	1·90	2·55	31·45	29·80	...	...
	5	M	...	...	30·63	31·63	...	...
	15	P	1·70	2·43	30·33	29·88	...	...
	17	M	1·17	2·88	31·02	30·51	...	...
	20	M	1·52	2·17	30·91	32·10	...	...
	22	M	1·94	2·05	30·55	31·68	...	...
	25	M	3·22	3·46	...	...	...	...
	26	M	...	...	30·95	30·64	...	...
	28	P	0·94	2·64	...	...	...	...
	29	P	...	...	31·04	30·71	...	...
November	1	P	1·92	1·94	...	...	...	...
	2	P	...	...	30·04	30·56	...	...
	18	P	2·07	1·65	32·13	30·21	...	...
	22	P	0·20	1·96	30·86	30·05	...	...